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ABSTRACT

Results of the secondary analysis of data obtained in a study of Head Start graduates in the public schools are presented and discussed in this final report. Unforeseen circumstances prohibited the full implementation of the original longitudinal research design, and, consequently, only one test battery was administered to first-grade students. The primary analyses of that data are reported in "A National Survey of Head Start Graduates and Their Peers" (ED 152 422-423): it is recommended that the original study and the secondary analysis be read sequentially for a coherent picture of the full study. Questions addressed in the secondary analysis are listed, and sampling procedures as well as designated variables are described prior to a discussion of the research findings. Head Start curriculum emphasis, ethnic composition of families and staff, sponsoring organizations, parent characteristics and involvement, teacher perceptions, preschool experience and academic achievement of children, interrelationships among predictors of child outcomes, characteristics of high-income Head Start families, and length of enrollment were investigated. For each of the general categories of research questions, findings are elaborated in technical discussions (including a depiction of recursive path models used) and in concluding statements. Statistical results are presented in 134 tables. Conclusions concerning academic and emotional development of Head Start children, ethnic and economic composition of the Head Start population, parent involvement, and regional effects are offered in the final section of the report. (Author/RH)

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SECONDARY ANALYSIS OF THE DATA FROM THE EVALUATION OF THE TRANSITION OF HEAD START CHILDREN INTO PUBLIC SCHOOLS

FINAL REPORT

CONTRACT NO. DHS/HDS 105-73-1303 Mod. #3
NOVEMBER 28, 1980

PS 012336

VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY
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VIRGINIA POLYTECHNIC INSTITUTE AND STATE UNIVERSITY

Blacksburg, Virginia 24061

EDUCATIONAL RESEARCH AND EVALUATION

Final Report of

SECONDARY ANALYSIS OF THE DATA FROM THE EVALUATION OF THE TRANSITION OF HEAD START CHILDREN INTO PUBLIC SCHOOLS

November 28, 1980

Contract No. DHHS/HDS 105-78-1303 Mod. #3

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Chapter 1

INTRODUCTION

In July 1975, the Office of Child Development, DHEW, awarded a contract to Abt Associates to carry out a study entitled Evaluation of the Transition of Head Start Children into Public Schools. This was to be the first national study of Head Start graduates in the public schools since the Westinghouse/Ohio study of 1969. Since the goal of the study was the identification of the contribution of Head Start to the performance of Head Start children in the first year of public education after Head Start, the study design called for four data points: the beginning and end of the Head Start year and the beginning and end of the first year of public school. It was expected that a Head Start experience would significantly change a sample of children intellectually, affectively and motivationally. If such changes occurred, it was also expected that they would persist into the public school careers of the Head Starters and be visible at the end of the first post Head Start year.

The Abt contract also called for the selection of a representative sample of Head Start centers and children. The goal was to generalize the findings to the widest possible audience so that accurate sampling was a highly desirable function. In addition, the goal of the Transition study included a description of the programs offered in Head Start, a description of the parents, centers, and center staff, and a description of parental attitudes toward and participation in Head Start.

The plan for achieving these goals focused, therefore, on the development of an extensive and representative sample of children, centers, and regions involved in the national populations of Head Start. It also included a full battery of instruments designed to measure the cross-sectional picture of centers and parents, and instruments designed to measure the change in performance of children over time.

The analytic design was constructed to allow for examination of the change in children and to assess the extent to which any changes observed over time could be attributed to the Head Start experiences of the children and the parents. There was no provision for assessing the character of the public school experience as a factor in the growth of the children because this would be an extremely complex and expensive task. The plan was to deal with the separation of Head Start effects from public school effects by statistical and aggregation techniques rather than by design techniques.

This was a substantial and technically sound approach to a complex problem. It was not, however, able to be accomplished in its entirety for reasons beyond anyone's control. Problems of cost limitations, unavoidable delays in getting plans through the myriad steps of review and approval, and a series of disasterous snow storms throughout much of the testing times, produced a shift from a longitudinal analysis of children's growth to a single data point design. The study was constrained to the administration of the children's test battery just once during the late fall to early winter of the first public school year.

This shift did not have an impact on the cross-sectional goals of the study, namely to describe the centers, center staff, parents, and parental attitudes toward and involvement in the Head Start programs. The shift did not influence the nature of the sample, of course, so that the attempt at representativeness of centers could, and did, result in a technically useful sample of centers.

The sampling of children for inclusion in the study, as opposed to the sampling of centers was, however, an aspect of the plan which could not be carried out with the intended results. The children were chosen from the classrooms in schools located in the areas of service by the sampled centers, but because of the wide dispersal of graduates of these centers, and because the full population of graduates of each center could not be acquired, the children in these classrooms are some subset of each center's graduates whose relations to the center's full population is unknown. Indeed, in many classrooms, there were no more than five Head Start children and they represented, at times, more than one center. In addition, before a datum could be collected, parental permission had to be secured and almost half the children in the sample pool were lost to the study because permission was not given by the parents. At the same time, comparison children were not selected on the basis of any sampling scheme because there were no data available to generate sampling frames. The investigators were forced to take children as they became available and there is no claim to representativeness of the childrens' group as there is to the center sample.

The analyses carried out, along with a full description of the issues raised above, are reported in detail in the Abt report (Royster, E. C., and Larson, J. C. Report AAI-78-7 A National Survey of Head Start Graduates and Their Peers.), presented to OCD (now Administration for Children, Youth and Families) in March, 1978. In general, it was reported that Head Start graduates, and in particular Black Head Starters, performed at a somewhat higher level on a standardized achievement measure, that public school teachers tended to rate the Head Start children as more active in social and non-social ways, and that parents of Head Start children were quite favorably disposed toward Head Start and showed that disposition by becoming involved with the centers and the staff.

These findings are extremely useful in expanding the knowledge base of Head Start but do not by any means exhaust the issues which might be addressed in examining the data base developed by the transition study. A continued consideration of the potentials of that base led ACYF to issue an RFP in late spring of 1978 to carry out a secondary analysis of the transition data. The focus of the RFP was a series of issues which ACYF identified as the most useful for policy considerations. The work of the secondary analysis was defined as an extension of the original analysis so that the original and the secondary analyses taken together could represent a relatively thorough utilization of the data base.

In September, 1978 a contract was awarded Virginia Tech to do the secondary analysis. The work which was done follows the issues identified in the RFP as closely as possible. In some cases, it was not possible to deal with an issue as identified in the RFP because the data base would not support the appropriate analysis. In these instances, the issue was redefined to match the content of the data base. It should be noted that some overlap among the issues exist so that in dealing with the questions and issues of the RFP in the order in which they were presented inevitably produces some redundancy. At the same time, neither the RFP not this report makes any pretentions about an internally coherant set of issues. The work reported here represents the consideration given to the issues of interest to ACYF as an extension of the work done in the original analysis. In order to acquire a coherant picture of the full transition study, both the original and the secondary analysis have to be read in tandem.

It is just because the two studies have to be taken together that a full description of the data base, sampling procedures, operational steps and analytic routines of the original study are not repeated here. A description of the variables and the analytic techniques used in the present study is of course presented, and these are contrasted to those used in the original study when necessary, although the original analytic runs were not repeated in the secondary analysis. The revised RFP questions are presented in the order given. The major section of this report is the presentation of the answers to each question, a technical discussion of the process of acquiring those answers, and some conclusions about each set of answers. Each question can be read independently of the others, although all should be read along with the original report in order to get the full sense of the Transition data base.

Research Questions

Question 1: Head Start Curriculum Emphasis.

Center directors were asked in the Head Start Questionnaire to describe the goals and the activites of their centers. Although most of the directors agreed on the goals of their centers, a considerable variability of activities was reported. What are the differences in activities which take place in the sampled centers, with what other properties of the centers and parents are these activities associated, and what effects on children might these activity differences have? In order to examine these issues, the reports of the center directors were analyzed and three activity emphases were identified: activities which encouraged academic growth; activities which encouraged social development; and dramatic/expressive activities. Each center was scored for the relative emphasis on each of these domains of activities. Among the questions asked concerning curriculum emphases of Head Start centers are:

Do the activity emphases at individual centers vary according to the family background of the children attending them?

Do the activity emphases vary according to the family ethnicity?

Do the activity emphases in centers vary according to the ethnicity of the staff and the ethnic match of staff and children?

Do activity emphases in centers vary by region or city size?

Do activity emphases vary by center auspices?

Do activity emphases in centers vary by the kind of training available for the staff?

Do activity emphases in centers vary by the parental attitudes and expectations which parents exhibit toward the center or toward children?

Do activity emphases in centers vary with parental involvement in the centers?

Do activity emphases in centers produce differential outcomes in child performance on achievement tests or affective/social behaviors?

Question 2: Ethnic Composition of Families Served by Head Start

The original analyses indicated that Head Start centers varied in regard to the ethnic mix of the families enrolled. A number of important issues about the source of such variation, the continuity (or discontinuity) of ethnic mixing across Head Start and the public schools in which the Head Start children enrolled, and the consequences of these various kinds of ethnic experiences were not considered in the original analyses. The purpose of the present analysis is to provide a more detailed examination of the characteristics of centers with different ethnic mixes and the relationship between center ethnic mix and the public school classroom mix. In addition, the present analysis considers the effects of ethnic mix on child academic and social development, peer adjustment, and parental attitudes toward the public schools. The following questions were examined in the analyses of ethnic composition:

> What are the racial/ethnic mixes of the public school classes into which the Head Start children enter?
>
> Are there systematic differences in child outcome measures between the children from centers with different racial/ethnic mixes?
>
> When Head Start children enter elementary school classes with racial/ethnic composition different from the Head Start center do they experience any problems of peer adjustment as measured by the Schaefer Hostility/Tolerance and the Bellar Aggression rating scales?
>
> Are there differences in parental attitudes toward school, or educational aspirations or expectations, which are associated with ethnic composition of centers?

Question 3: Ethnic Compostion of Staff Participating in Head Start.

The original analysis of the distribution of staff ethnicity within staff positions indicated an almost equal representation of Black and White staff (47.3% and 44.4% repectively), and the ethnic compositions were generally equal at all staff levels. However, the degree to which there is ethnic representation across staff levels within centers was not addressed. It is therefore the task of this secondary evaluation to examine the data relevant to the issue of ethnic representation within centers at all levels of staffing. Specific questions addressed in this analysis included:

To what extent are staff with different ethnic backgrounds represented at the staff level within individual centers?

For those centers which have a racial/ethnic mix at the staff level, are there systematic patterns of ethnic staffing or do different ethnic staff tend to be distributed across all levels (e.g., supervisor, teacher, aide)?

Are there systematic patterns of ethnic staffing across types of sponsorship?

Does the staff composition generally match the ethnic composition of the Head Start children for individual centers? Do those centers without a match tend to be located in any particular region or in any community type?

Question 4: Head Start Center Auspices.

The Head Start programs sampled in the transition study were sponsored by Community Action Agencies, Nonprofit Agencies, Public Schools, Colleges, Religious Organizations and Others. In this project the relations of auspices with center programs, parent attitudes and behaviors, and child outcomes are considered by examining the following questions:

Are center auspices distributed equally in all regions of the country?

Are there major differences in the family background of the participants across different program sponsorships?

Are there variations in program activities in centers under different sponsorships?

Are there differences in staffing patterns across different types of sponsorship?

Are there differences in staff and parent training across different types of auspices?

Are there differences in parental attitudes toward schools across different types of sponsorship?

Are there differences in parental educational aspirations and expectations for their children across different types of sponsorship?

Do teacher's perceptions of Head Start children differ under different types of sponsorship?

Is parent involvement different in Head Starts under different sponsorships?

Question 5: Parent Involvement in Head Start

One of the major components of all Head Start programs is parent involvement. This project focused on four measures of parent involvement: (1) parent involvement at the Head Start Center, (2) parent involvement with the child's teacher, (3) parent involvement with other parents, and (4) parent involvement with the child in the home. These measures have been examined in relation to several characteristics of Head Start families and Head Start Centers. Several questions addressed in this study relative to parent involvement included:

Do the patterns of parent involvement vary according to family background?

What is the relationship between the type and frequency of parent involvement in Head Start and parents' attitudes toward school?

Do the patterns of parent involvement vary according to region or community type?

Does the type and frequency of parent involvement vary under different program sponsorship?

Does the type and/or frequency of parent involvement in Head Start and in public school differ according to the centers racial/ethnic mix?

Is the type and/or duration of parent involvement related to child outcome measures? If so, how and for which outcomes?

Is the type and/or duration of parent involvement related to the learning environment and learning materials found in the Head Start children's homes? If so, does the relationship change with different family backgrounds?

Are the home learning materials related to the child outcome measures? Does this vary with family background?

Question 6: Preschool Experience of Non-Head Start Children

In the original analyses, almost half of the non-Head Start children had experienced some kind of out-of-home preschool. In addition, many Head Start children had some kind of preschool experience before entering Head Start.

The present analysis identified 1034 Head Start children in the data base, of whom 121 had some preschool in addition to Head Start. Also identified were 555 children who did not go to Head Start (i.e., the comparison children). Of these 211 attended some kind of preschool before entering the public schools. The present study examined these four groups of children (Head Start children with and without some other experiences, and non-Head Start children with and without some kind of preschool experience) on a number of dimensions. These questions include:

> What type of program did the non-Head Start children attend? What type of program did the Head Start children with other preschool experience attend?
>
> How long did the children in this sample attend their respective preschools?
>
> What differences are there in family background between Head Start, non-Head Start, Head Start plus other preschool experiences, and no preschool groups?
>
> Are the children in these preschool categories equally distributed across regions?
>
> Are there differences in the type of play materials in the homes of the Head Start, non-Head Start with and without preschool and non-preschool groups?
>
> Are there differences in the amount of verbal interaction between parents and children in Head Start and non-Head Start families? Is there a difference in the pattern of TV watching?
>
> Are there differences in parental expectations among the families of Head Start and non-Head Start children?
>
> How do the public school teachers perceive the Head Start children compared to the non-Head Start children? Are these differences related to family background?

Question 7: Performance of Head Start Children in Public School

The initial analysis of the transition data showed that some effects on academic and social development associated with Head Start attendance could be discerned. The present analyses continued examining some of these issues to determine if Head Start effects are distributed equally across regions of the country, are associated with the kinds of activity emphases that were offered in different Head Start centers, are associated with family background factors, or are associated with patterns of parent involvement in the Head Start centers. Specific questions examined were:

> Are Head Start effects distributed equally across regions of the country?
>
> Are the outcomes of Head Start associated with the kind of activity emphases that were offered in the different centers?
>
> Are Head Start effects associated with family background factors?
>
> Are Head Start effects associated with patterns of parent involvement in the Head Start center?

Question 8: Teacher Perceptions of Head Start Children

The original analysis of public school teachers' rating of children in their classrooms showed that Head Start children were generally rated higher on some social motivational factors than other children. The interpretation of these findings is difficult until the meanings underlying these ratings are determined. The purpose of the present analysis is to extend the examination of teacher ratings to clarify their meanings, to establish a set of scales that would reliably reflect these meanings, and to determine the relationship between teacher ratings of Head Start children and family background characteristics of the children as well as their academic performance. To accomplish this the following questions were examined:

> Do public school teachers' perceptions of Head Start children vary according to family background of the children?
>
> Is there a relationship between teacher perceptions of children and their social and academic performance in kindergarten?

Question 9: A Model of Interrelationships Among Predictors of Child Outcomes

In the original study, a series of outcome measures were analyzed as dependent on such family background factors as mother's education, family income, and home stimulation variables. In addition, selected measures of parental attitudes and parent involvement were used as predictors. In the secondary analysis, these factors along with measures of Head Start activities are entered into a model of interrelationships to find the most effective set of causal paths to child outcomes. These analyses attempted to answer the following question:

> Is there a predominant set of interrelationships among SES factors, parent attitudes, home stimulation measures, parent involvement measures, and the Head Start program activities which leads to heightened levels of child outcomes?

Question 10: Characteristics of High Income Head Start Families

In the original study it was found that the national sample contained a larger portion of higher income families than was expected. The focus of this analysis is to describe their characterisitcs and determine the curcumstances under which these families are participating in Head Start programs. Income for this study is viewed in three ways: household income, eligibility (based on DHEW guidelines) and per capita income. The following questions were addressed:

> Are high income Head Start families located in any particular region or community type?
>
> Under what type of program sponsorship are the centers attended by these higher income families?
>
> What are the background and demographic characteristics of these families?
>
> What patterns of parent involvement are found among the higher income families?
>
> What are the parental attitudes toward school? What are parents' educational expectations for their children?

Question 11: Parent Characteristics Associated with Parent Involvement

Question 5 of the RFP, which focused on aspects of families and centers which were related to parent involvement, provided an opportunity to contrast two different notions about the sources of motivation for involvement. On the one hand, parental economic and educational status was considered a source of involvement on the assumption that the values which distinguished between parents of different socio-economic statuses would predict motivation to become involved. On the other hand, the assumption was made that all parents were motivated to become involved, but those who had fewer resources in time and energy would tend to be less involved. Resources in time and energy were estimated in terms of the number of adults in the family who worked and who therefore had limited time to become involved. It also was estimated by the number of adults in the family on the grounds that the more adults present, the greater the resources for in-household child care so that at least one parent could be able to leave the house to attend Head Start activities.

The findings of Question 5 indicated that the measures of in-home resources did not predict involvement, but that the indicators of SES did. In order to examine these SES contributors in greater depth, the present study considers the complex of parental attitudes, home factors and SES as interrelated paths toward involvement in the Head Start programs and centers.

> Is there a predominant set of interrelationships among SES and attitudinal factors which leads to heightened levels of involvement?

Question 12: Length of Enrollment as a Factor in Child Outcomes

The analysis of effects of activity variables describing Head Start center programs has been reported in Question 1. In this section, questions related to the role of length of enrollment in preschool and the length of enrollment in Head Starts with particular activity emphases are addressed.

> Does the pattern of time in preschool vary across regions?

Does the length of enrollment in Head Start contribute to the performance of children in academic or affective measures?

Does the length of enrollment in Head Start programs with particular activity emphases contribute to the performance of children on academic or affective measures?

Chapter 2

SAMPLING PROCEDURES

Sampling Algorithm

The sampling algorithm used in the original transition study is described in great detail in the original Abt report. For reference purposes, the following summary taken directly from the original report (p. 3-5 and 3-6) provides a brief description of the sampling stages used:

1. A list of all Head Start delegate agencies was compiled.
2. The delegate agencies were grouped so that all of the delegate agencies that fall within a given site (say a city) were grouped together. Thus, for example, all of the delegate agencies in Los Angeles were grouped to form one sampling unit.
3. Sites were stratified by urban, small town and rural and by geographic region (Northeast, South, Southwest, and West).
4. Within each stratum delegate agencies were sampled in proportion to the number of Head Start students enrolled. Approximately 300 sites were selected to conduct a survey to obtain revised child counts along with ethnic and linguistic data. Three hundred sites provided a sufficient pool from which to draw the study sites required for the transition study.
5. Based upon this new survey a sample of 43 (last minute attrition of two urban sites reduced the initial goal of 45 sites to 43) primary and alternate sites were selected for the transition study.
6. Within each site a list was compiled of all of the schools that Head Start graduates attend.
7. A sample of schools within each site was selected so that an adequate number of Head Start children would be available for testing. The sample size was made large enough at this stage to allow for the expected level of attrition both of entire schools and of students within schools (because of lack of cooperation, for example).
8. Contact was made with SEA's and LEA's to obtain permission to proceed.
9. All of the Head Start children within the sampled schools were rostered. A letter containing information about the study and a parent permission form were sent to Head Start parents.
10. Within the rostered classrooms, a similar letter asking for permission to take part in the study was sent via the non-Head Start children to their parents.
11. Schools which refuse to cooperate and those for which sufficient parent permission letters were not received were eliminated from the sample.

12. Within schools classrooms were eliminated if a sufficient number of parent permission letters were not received.

13. The final selection of schools and classrooms within schools was made based upon the availability of Head Start and non-Head Start graduates in each classroom.

14. A final selection of 32 sites was made from the 43 originally selected.

15. A sample of Head Start graduates was chosen from selected classrooms.

16. A comparison group was sampled from the same classrooms.

Classification of Head Start and Comparison Children

The operational definition of a Head Start child in the original Abt study was an English-speaking child who had attended a full year program of Head Start. The comparison group consisted of some children who were eligible for the Head Start program but who did not attend (or attended for only a brief period) and other children who were not eligible for the Head Start program. For analytic purposes, the comparison groups should be equivalent to the Head Start sample in background variables and in school experiences. In order to produce nearly equivalent groups, a number of steps were undertaken. The comparison groups were chosen from the same sites as the Head Start groups. School year experiences were partially equated by selecting the comparison groups from the same classrooms as Head Start groups. Information such as sex and ethnic group were recorded to allow for the adjustment of non-treatment related differences. Since most classrooms had fewer than five Head Start graduates, it was possible to select a comparison group of non-Head Start children, though the quality of this comparison group differed from classroom to classroom.

For the purposes of classifying children into preschool categories, Abt focused their attention on two questions in the parent questionaire. These two questions were "Before kindergarten, was your child enrolled in preschool?" (Question 8), and if yes to this question then "What kind of preschool?" (Question 8A). If a parent responded "No" to the first question the child was classified in the "No Preschool" group. If the answer to the first question was "Yes" then the second question was examined. A response of "Head Start" entered the child in the "Head Start" group, while a response of "Nursery School", "Day Care", "Play Group", or "Kindergarten" entered the child in the "Non-Head Start Preschool" group. The original transition preschool variable had the following breakdowns: 355 No Preschool children, 313 Non-Head Start Preschool children, and 656 Head Start children.

This system of categorization is somewhat over simplified and thus resulted in some misclassifications of children into preschool categories. A new classification system was developed based on the following issues:

1. Head Start children may also have had preschool experiences prior to Head Start. In fact there were 113 children who had such additional preschool experiences. These children were classified as a fourth group, "Head Start Plus Other Preschool." The parents of 106 of these children indicated that the children had previous-to-Head Start preschool experiences (Q8A) and 7 parents did not answer Q8 but did indicate in Q8A that their children had both Head Start and other preschool experience. This is at variance with Abt's decision to categorize all children as non-Head Start whose parents indicated on Q8A that they had been enrolled in some other kind of preschool. Thus, 113 children were transferred from Abt's original Non-Head Start Preschool category into a new category Head Start Plus Other Preschool category. The 313 children which Abt categorized as Non-Head Start Preschool is in fact composed of only 207 such children. In addition, 12 children were identified by their parents as having attended preschool other than Head Start (Q8A). The actual total for Non-Head Start Preschool is therefore 219.

2. The total number of children who attended Head Start Only was originally reported by Abt to be 656. However, 44

children whose parents did not respond to Q8 (the criterion used by Abt to categorize Head Start Only children) were described by their parents in Q8A as having attended Head Start Only. We have other data to verify that these children did attend Head Start and have, therefore, included then in the total number of Head Start Only category which now numbers 700 children.

3. By merging the Merged Analytic File (kid data) with Head Start Center Questionnaire (HSCQ) data and with LINUS data pertaining to Head Start Center enrollments, additional students were identified as having participated in Head Start. It is assumed that kids with Head Start Center data participated in Head Start. Without this merge of the three data files at kid level, Abt Associates could not identify these additional Head Start children.

In the first step of the merge, kid data with HSCQ, an additional 165 kids were identified as Head Start children. Five of these children were classified as Head Start Plus Other Preschool since their parents had indicated that they had attended a non-Head Start preschool, while the remaining 160 children were grouped into the Head Start Only category. Of these 160 Head Start children 154 had no information on Q8 or Q8A, and six parents indicated that their children had no preschool experience. This resulted in the following frequencies:

Unable to Classify	447
No Preschool	346
Other Preschool	214
Head Start Only	860
Head Start Plus Other	118

In the second step of the merge, 56 additional Head Start children were identified. Fifty-three of these were reclassified as Head Start Only; three of these as Head Start Plus Other Preschool. The combination of all of these data manipulations increased the number of children categorized as Head Start Only considerably, reduced the number of children classified as Other Preschoolers and kept the number of children in the No Preschool group essentially the same. The final preschool breakdowns of this classification system were:

Unable to Classify	396
No Preschool	344
Other Preschool	211
Head Start Only	913
Head Start Plus Other	121

Chapter 3
VARIABLE LIST

The variables in the several research categories are presented in this chapter. The psychometric properties of these variables are included in the Appendix. This includes the distributional properties of all variables with particular emphasis on those which were either not used in the original analysis or were modified in some form from that which was used in the original.

The major variables which were constructed as part of the secondary analysis, and which were not used in the original include:

A. Activity Emphases of Centers. Judgements of the center directors were submitted to the factor analytic procedure. A factor structure emerged which was then used to describe each center.

B. Wide Range Achievement Test Factor Structure. The subtests of this achievement test were submitted to the factor analytic procedure and eight relatively interpretable factors emerged. Three of these related to the use of words, sentences, and letters; four had to do with numbers, counting, and problem solving; and one factor included a spatial/motor task (digit symbol).

C. Affective Outcome Measures. The Beller rating scales and the Schaefer rating scales which public school teachers used to rate all the sample children were combined and entered into the factor analytic procedure. Two strong factors emerged. These were labeled the "All American" child scale, and the "Assertiveness" scale. Each child was scored on each of these scales.

The factor structures for each of the above measures are reported in the Appendix and at the end of each appropriate question in this report. The remaining measures, all taken from the original data base, are essentially the same as those used by the original investigators. Distributional data on these variables are also presented in the Appendix. These data are the same as those reported in the original study and are being repeated here for the sake of convenience for the reader.

A full list of all variables used in the study follows:.

Region

BLOCKING VARIABLES

1. Regional Area (AREA):
   (1) Northeast
   (2) Southeast
   (3) Southwest
   (4) West

2. Community Type (SIZECITY):
   (1) Farm or Open Country
   (2) Small City 2500-25,000
   (3) Medium Sized City 25,000-100,000
   (4) Large City 1000,000 or more

Head Start Center Characteristics

HEAD START OUTCOME/CHILD OUTCOME PREDICTORS

1. Head Start Activity Emphases (factor scores):
   a. Academic Knowledge and Skills (ACTFACT1)
   b. Social Knowledge and Skills (ACTFACT2)
   c. Dramatic/Expressive Play (ACTFACT3)

HEAD START PREDICTORS

1. Auspices:
   (1) Public School
   (2) Private or Parochial School
   (3) Institute of Higher Learning
   (4) Religious Related Organization
   (5) Private non-profit group (other than a private school)
   (6) Local Community Action Agency
   (7) Other

2. Ethnicity in Percent: (1) 90% or more Black, (2) 90% or more White, (3) 90% or more Other, (4) 70-89% Black, (5) 70-89% White, (6) 70-89% Other, (7) 69% or less Black majority, (8) 69% or less White majority, (9) 69% or less Other majority, and no major race.
   a. All Staff (STAFFETH)
   b. Supervisors (SUPETH)
   c. Teachers (TCHETH)
   d. Aides (AIDETH)
   e. Enrollment (CENTETH)

3. Head Start Training: (1) In-service training by supervisors, (2) In-service training by consultants, (3) University sponsored eight-week training sessions, (4) University sponsored one-week training sessions, (5) Lectures by specialists, discussion groups, and (6) After hours classes at a school or college.
   a. For Teachers
   b. For Parents

Family Characteristics

ADJUSTING VARIABLES

1. Mother's Education (MAED): Years child's mother attended school.

2. Per Capita Income (PCI or PERCAP): (1) $1 to $599, (2) $600-$999, (3) $1000 to $1499, (4) $1500 to $2099, (5) $2100 to $2999, (6) $3000 or more.

3. Home Stimulation (HOMESTM2): Number of learning materials plus number of children's books in home.

PREDICTOR VARIABLES

1. Parental Attitudes: HESS Attitude Scale (factor scores).
   - a. School Negativism (HESSFS1)
   - b. Value of Education (HESSFS2)
   - c. Education as Upward Mobility (HESSFS3)
   - d. Social Traditionalism for Children (HESSFS4)
   - e. Positive Perception of Teachers (HESSFS5)

2. Parental Perception of Locus of Control: (1) Internal and (2) External.
   - a. General (LOCUS)
   - b. Specific (Related to School) (HESSLOC)

3. Parental Involvement
   - a. At Center: (0) Never, (1) Less than 4 times a year, (2) 4 times a year, (3) Once a month, (4) Twice a month, (5) Once a week.
   - b. With Parents: (0) Did not meet, (1) 4 times a year or less, (2) Once every 1 or 2 months, (3) Twice a month, and (4) Once a week.
   - c. With Teachers: Frequency of visits, (0) Never talked to (5) Five or more.
   - d. With Child at Home: (0) Never, (1) Once a month, (2) 2 or 3 times a month, (3) Several times a week, (5) Every day.

4. Parental Expectations
   - a. Perceived Ability of Child: (1) Less than average, (2) Average, and (3) Above average.
   - b. Perceived Performance of Child: (1) Poor, (2) Average, (3) Good, and (4) Excellent.
   - c. Perceived Aspirations of Child: (1) Finish 8th grade, (2) Finish high school, (3) Attend a vocational or a 2 year college, (4) Attend at least a 4 year college.

Child Characteristics

BLOCKING VARIABLE

1. Ethnicity:
    (1) Black
    (2) White
    (3) Other

PREDICTOR VARIABLES

1. Type of Preschool Experience:
    (1) No preschool
    (2) Other preschool
    (3) Head Start only
    (4) Head Start plus other experience
2. Length of Enrollment: Months in preschool.

OUTCOME VARIABLES

1. WRAT Reading (factor scores):
    a. Spell and Read Words
    b. Name Letters
    c. Copy Marks
    d. Letter Recognition
2. WRAT Math (factor scores):
    a. Written Math
    b. Oral Math I (Easy)
    c. Oral Math II (Difficult)
    d. Counting Dots
3. Social/Affective (factor scores):
    a. All American
    b. Assertive

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Chapter 4

RESEARCH FINDINGS

The major purpose of this project is to consider the several broad policy relevant issues which have been raised by ACYF as a result of the original transition study. These issues, and some of the specific questions with which they are associated were provided in the Scope of Work for this project. In this section of the report, each of the issues identified in the Scope of Work are considered in turn and the findings related to each of the questions within each issue are presented in a standard format. The general issue is first presented in a way which reflects the ACYF formulation. The findings for each question are then presented in summary form. Following this presentation of findings is a technical discussion section which deals with the data and analytic issues involved in developing the findings. Readers interested in exploring the basis for any particular finding should be able to do so from the information presented in this section.

Following the technical discussion section is a conclusions section in which the interpretative judgments of the authors of this report are, where appropriate, presented. Following the conclusion are the tables summarizing the appropriate data for the questions associated with the general policy issue under discussion. The next broad policy issue is then stated with the findings, technical discussion, conclusions, and tables following in that order.

Question 1: Head Start Curriculum Emphasis

Center directors were asked in the Head Start Center Questionnaire to describe the activities of their centers. Although most of the directors agreed on the goals of their centers, a good deal of variability of activities was reported. What are the differences in activities which take place in the sampled centers, with what other characteristics of the centers and parents are these activities associated, and what effects on children might these activity differences have? In order to examine these issues, the reports of the center directors were analyzed and three activity emphases were identified: activities which encouraged academic growth; activities which encouraged social development; and dramatic/expressive play activities. Each center was scored for the relative emphasis placed on each of the domains of activities.

Do the activity emphases at individual centers vary according to the family background of the children attending them?

There appears to be no relationship between family income or mother's education and the kind of activity which is emphasized in the Head Start in which the child is enrolled.

Do the activity emphases vary according to the family ethnicity?

Yes. Centers which have a predominantly Black enrollment (70% or more Black) emphasize academic activities much more than centers which have a predominance of White children. On the other hand, centers with predominantly Black children do not emphasize dramatic/expressive play activities as much as other centers. Predominantly Black and predominantly White centers emphasize social development activities equally.

Do the activity emphases in centers vary according to the ethnicity of the staff and the ethnic match of staff and children?

Yes. Centers in which 70 percent or more of the children and of the staff are Black strongly emphasize academic activities, whereas centers in which 90 percent or more of the children and the staff are White report the least emphasis in these activities. On the other hand, Black centers (70 percent or more of both children and staff are black) show the least emphasis on dramatic/expressive play activities. Those centers in which no race is predominant among the children enrolled in the center or the staff tend to emphasize social knowledge and skills activities.

Do activity emphases in centers vary by region or city size?

Centers in the Southeastern and Southwestern regions show the strongest emphasis in academic activities; centers in the Northeastern and Western regions showing the least emphasis on this activity. Southeastern centers reported slightly higher emphasis on social activities. Finally, Northeastern and Western centers are described as strong in dramatic/expressive play, whereas Southeastern centers generally are in the lowest two quartiles with respect to this activity.

In terms of city size, rural and farm based centers are the only groups which report a single consistent emphasis. These centers emphasize dramatic/expressive play, and exhibit relatively little toward academic emphases.

Do activity emphases vary by center auspices?

To a small extent. Centers sponsored by Community Action Agencies are equally divided into groups which strongly emphasize academic activities, social activities, and dramatic/expressive play. Among the centers which are sponsored by local public schools, half strongly emphasize social activities while the remainder do not emphasize these activities. Centers sponsored by nonprofit groups tend to emphasize dramatic/expressive play activities while not emphasizing social activities.

Do activity emphases in centers vary by the kind of training available for the staff?

Centers which concentrated their training activities in university-sponsored training sessions were those which reported strong emphasis in dramatic/expressive play activities. No other relationships between the kind of training available and activities in the center are observable.

Do activity emphases in centers vary by the parental attitudes and expectations which parents exhibit toward the center or toward children?

Yes. Parents whose children attend Head Start centers which strongly emphasize academic activities tend to have more negative attitudes toward public schools than parents whose children attend other centers. Parents whose children attend centers which emphasize dramatic/expressive play have the highest scores on the Positive Perceptions of Teachers Scale and generally have positive attitudes toward school.

Do activity emphases in centers vary with parental involvement in the centers?

Yes. There is a tendency for (1) parent helping at the center, and (2) parent talking to the teachers to be lower in centers which place strong emphasis on academic than in centers which place a weaker emphasis on such activities.

Do activity emphases in centers produce differential outcomes in child performance on achievement tests or affective/social behaviors?

There is no significant contribution of the activity emphases in centers to the performance of children in kindergarten. When activity emphases are modified by the length of time children attended Head Start, just one finding emerges. The longer children attend centers with academic emphases, the higher the scores on one of the eight achievement scores (viz. naming letters). A few other impacts of the relationship between length of attendence and type of activity on various outcomes were noted in each of the different regions of the country although no consistent trend emerged. (See Question 7 for a full discussion of these findings.)

Technical Discussion

It is reasonable to assume that the program or the experimental content of the program of Head Start should contribute to the successful transition of children to the public schools. It is also true that the kind of program variables which might be considered the effective psychological/educational antecedents to successful transition have generally not been measured in the course of Head Start studies. Indeed, the major criticism of previous national studies of the effects of Head Start is precisely that Head Start as an educational/developmental experience has not been examined. Despite the nationally defined program preformance standards, there are as many Head Starts (in the sense of a psycho/educational experience) as there are Head Start classrooms. Unfortunately, the measurement of the Head Start program as experienced by children is an extremely expensive and time consuming task involving a great many technical problems which have not yet been solved. The next most useful estimate of the program is the description of the curriculum provided by those most knowledgable. It is to these descriptions which we turn for an examination of the Head Start program.

On the assumption that program content is associated to some significant extent with developmental processes in children (and to the transition process to the public schools), it is of major policy relevance to consider the sources of variation in program content across Head Start centers. Performance standards are very broadly stated so that a great many local factors contribute to the selection of particular program elements and to the manner by which they are applied to children. This is, of course, as it should be since Head Start is conceived as locally controlled in a great many of its policy aspects despite the general thrusts and selected program elements established by administrative guidelines drawn at the federal level. However, such a local option makes it imperative that objective evidence for program content be established. At the same time, it is very important that an intensive search be made for those policy relevant factors which may influence the selection of desireable program elements by local administrators. Using the data base available on the national transition study, an attempt to find program descriptors and a wide range of their policy related correlates was carried out in the present study.

The first task was to seek information in the data base on the content of the programs administered in the centers from which the transition sample of children graduated. There are in fact only two such sets of information. First, the questionnaire administered to the directors of these centers presented five very general program goals and asked that these goals be rank ordered according to their importance for the children in the center. We have previously reported (Interim Report, March 30,1979) that there is an overwhelming similarity among the center directors in their ranking of these general goals for children. The vast majority indicated that social skill development was their first priority and that academic skill development was their lowest priority. Some small variation among the rankings of the other three goal statements was apparent, but on the basis of several attempts to cluster, rank order score, and some ANOVA procedures, we concluded that there was not enough diversity of rankings to use these data to differentiate among centers.

The second set of information on program content was also found in the Center Questionnaire administered to the center directors. Each director was asked to rate each of the 14 activities along two dimensions. The first dimension was the frequency with which the activity was offered in the center, and the second dimension was the importance of the activity in the overall curriculum. A single rating of each activity was constructed by multiplying the score on each dimension together for each center director. The resultant distribution of activity scores indicated a good deal of differentiation among center directors (see Interim Report, March 30, 1979). Since a very wide range of activities were represented on this list, it was deemed reasonable to submit these scores to a factor analytic procedure (principal components solution with varimax rotation). Although five factors reached the criterion of eigenvalue greater than 1.0, we feel that only three substantially interpretable and rational factors emerged from this procedure. The factors and the rationale for selecting these three factors are summarized in Table Q1.1.

The three factors have been named: Academic knowledge and skills; Social knowledge and skills; and Dramatic/Expressive Play, respectively. Factor scores were calculated by multiplying the standardized rating of the item by the factor score coefficient for that item and summing this product for all 14 items within each factor. Thus, the distribution of factor scores are independent of each other and have quite adequate variability across centers. We shall take these three scores for each center as reflective of the pattern of activity offered in that center. Although we cannot say how these activities were uniquely administered to individual children, we believe that it is possible to use these scores as a means of differentiating the kinds of experiences children received across centers. It is reasonable, therefore, to look for correlates of these center variations, and, in subsequent sections of this report, to examine the relationship between these variables and the performance of children on the academic and social measures taken while they were in kindergarten. The correlates of center activity scores are presented in the remaining sections of this chapter.

The first set of correlates are the demographic descriptors of the centers. The four major geographic areas identified in this study were: Northeast, Southeast, Southwest and West. Tables Q1.2 to Q1.4 summarize the distribution of each activity factor within each area of the country. There seems to be some differences across these areas in the kinds of activities which are emphasized. It is likely that these area differences reflect unique cultural properties some of which will be discussed elsewhere in this chapter.

The first activity factor, Academic Knowledge and Skills, tends to be most heavily emphasized in the centers of the Southwest and least emphasized in centers of the Northeast and West. Two-thirds of the Southwest centers are in the fourth (highest) quartile of the distribution of these factor scores. Centers in the Northeast and West are distributed approximately equally in the lower three quartiles. Centers in the Southeast are distributed generally in the upper three quartiles. As we shall see in later sections of this report, these differences in academic activity emphases by area correspond to the differences in ethnic composition of the centers in these areas. Note that generally, centers in the southern areas of the country place heavier emphasis on academic activities than in the northern areas, and this is all the more so in the Southwest than in the Southeast.

The second activity factor, Social Knowledge and Skills emphases, shows a rather different distribution over the areas of the country. For this factor, centers are distributed relatively equally across all four quartiles regardless of region.

The third factor, Dramatic/Expressive Play, shows still another pattern of distribution over the areas of the country. The eastern areas are sharply divided; the Northeast tends to have most of its centers in the higher quartiles, whereas the Southeast centers are predominantly in the lowest quartile. Centers in the Southwest are generally in the intermediate quartiles while in the West most of the centers tend to be distributed in the two highest quartiles.

Another demographic variable examined in relation to the center activity measures is city size. This variable is composed of four intervals: large (more than 100,000), medium (25,000-99,999), small (2,500-24,999), and rural (less than 2,500 and farm). Tables Q1.5 to Q1.7 summarize the distributions of activities within each of these groups. There are several findings which should be mentioned.

The large and medium size cities tend to have centers distributed equally across the quartiles for all three activity factors. A minor variation on this theme is that the large cities tend to be split into two extreme groups with repect to the social factor; over half the large cities strongly emphasize this factor while the remainder do not emphasize it at all. We are not yet prepared to explain this split and will consider the issue in the context of other analyses at a latter point in this report. However, there is a wide range of variation across all three activity factors in the largest and medium size cities from which the present sample was drawn.

Small towns also tend to have centers which are broadly scattered across the several types of activity emphases. There is, with these towns, a slight tendency for the centers to be located in the lower end of the distribution of dramatic and expressive play.

It is in the rural and farm bases centers that a unique distribution of activities is found. In the centers in these locations the emphasis is on dramatic/expressive play, with very little emphasis on social skills, and almost no emphasis at all on academic knowledge and skill acitivity.

In order to begin to draw some order out of this set of findings, it is useful to consider the relationship between the ethnicity of the children in the centers and the ethnicity of the staff in these centers with respect to the activity emphases reported by the center directors. Tables Q1.8 to Q1.16 summarize the distribution of the three activity factors in centers which vary according to the ethnic composition of the staff and the children enrolled. For purposes of these comparisons, ethnic composition is defined as Black (70 percent or more Black children), White (70 percent or more White children), and Integrated (all other combinations of Black and White children). This system of categories includes all but a few centers and makes the comparisons among ethnic groupings manageable. In order to make these analyses even more useful, we have categorized the ethnic composition of the staff in each center by the same criteria, and we have defined ethnic matches between children and staff within centers using these same categories.

Generally, with respect to the first activity factor, centers which have a predominantly Black enrollment emphasize academic activities, and centers which have a predominance of White children do not emphasize these activities. Integrated centers tend to provide academic activities at an intermediate level of emphasis. The distribution of ethnicity of staff across the levels of emphasis of this activity is very similar to, but not as extreme as, the distribution of children's ethnicity within this activity factor. Centers which have a predominace of Black staff tend to emphasize academic activities and centers with predominantly White staff do not emphasize this activity.

When the ethnic match between teachers and children is considered, a very striking difference is present in the academic activity factor. Centers in which 70 percent or more of the children and of the staff are Black strongly emphasize academic knowledge and skills activities, whereas centers in which 70 percent of the children and the staff are White are in the lowest quartile of this activity emphasis. Other kinds of centers share in intermediate positions of this activity.

Differences in ethnic compostion of the centers plays a smaller although just discernible role in the distribution of the social knowledge and skills activities. Centers with predominantly Black children and staff are similar to their White counterparts with respect to social knowledge and skills activities. The majority of these centers with ethnic matches between children and staff are clustered in the intermediate quartiles with more of the Black centers having a slight tendency to strongly emphasize the social activities. Centers having no major race predominant among either the children enrolled in the center or the staff instructing in the center tend to strongly emphasize these social activities.

The third activity factor, Dramatic and Expressive Play, show a reversal of these trends. Here it is the centers with high concentrations of White children and staff where the emphasis on dramatic/expressive play is found. Approximately 60 percent of the White centers are found in the top two quartiles of this distribution whereas almost 60 percent of the Black centers are found in the bottom two quartiles of the distribution.

Although there are not yet enough data to support a firm inference about ethnic preferences for activities for preschool children, the data suggest the difference in the activities which are reported by the center directors are associated with variations in the ethnic composition of both the child enrollment and the staff. What might be referred to as Black centers tend to focus on academic activities and those which might be called White staffed centers tend to focus on dramatic/expressive play. This does not appear to be a function of the size of the community in which the center is located, but is associated to some extent with the region of the nation. The southern regions tend to emphasize academic activities more than the northern regions, and the Southeastern region tends to have the lowest emphasis on dramatic and expressive play. It is difficult to determine at this point if the source of these emphases is some cultural/political/economic factor which distinguishes among these sections of the nation, or if it is the unique ethnic composition of those who are associated with Head Starts in each of the regions. We suspect that it is the ethnic composition of the regions rather than any other factor, but the verification of this assertion requires further analysis. One other demographic factor of the centers can be considered in this issue and that is the auspices under which the center operates. Although this factor may also be confounded with the ethnic composition of the delegate agencies, it is also possible that if differences in activity preferences exists among centers associated with different sponsoring agencies, it is the sponsoring agencies which contribute to the preferences. We turn now to the association between auspices and activity preferences.

Although there are six categories of auspices (Tables Q1.17 to Q1.19) only the categories Public Schools, Nonprofit groups, and Community Action Agencies have enough cases from which stable inferences can be drawn. However, the findings for all categories are reported, and the reader should remember to maintain greater confidence in the three mentioned categories than in the others.

The most important finding is that in the most heavily represented category of Community Action Agency (CAA), there is an equal distribution of centers over all quartiles for all three activity factors. Thus, CAA's appear not to contribute to the emphases of types of activities in any systematic way. There may indeed be an influence from the CAA to the center about the type of activity emphasized, but that influence does not have to do with the fact that the sponsoring agency is a CAA. If that influence is present, it has to do with the unique relationship between the center and the agency and this varies across all situations.

There is a very slight variation on this theme among the centers sponsored by public schools. For the academic and the dramatic/expressive activities, the difference is only in the lesser amount of variability found with this auspice rather than with the CAA centers. The distribution of public school centers on the social activity factor shows a somewhat different characteristic. Here, about half of the public school centers strongly emphasize the social factor and half do not emphasize it at all. This split is similar to the split among centers located in large cities where half were very high on this factor and half were very low. We shall examine the relationship between auspices and city size in a subsequent section. However, some of the reasons why public schools are split on this factor may be due to the ethnic composition of the communities within large cities in which their sponsoring agencies are located.

Centers sponsored by nonprofit organizations tend to be equally distributed across all four quartiles of the academic factor. However, centers under the auspices of nonprofit agencies place great emphasis on dramatic/expressive play activities and little emphasis on social knowledge and skills activities.

In order to increase our understanding of the distribution of activity factors, the character of the teacher training opportunities offered in the centers was related to the preferred activities. It was assumed that the types of training opportunities available to teachers might be the source of the activity preferences. The assumption was somewhat tenuous since the training opportunity variable as used in the questionnaire submitted to center directors referred only to the form and not the content of the training. Thus the response choices covered inservice training, university-sponsored training sessions, lectures by specialists, and after-hours classes at a school or college. The only findings here, (Tables Q1.20 to Q1.22) were that centers which concentrated its training opportunities in university-sponsored training sessions were high in preferences for dramatic and expressive play. Since we do not know the content of the sessions, it is not possible to determine if the preferences were the result of the training or if centers which preferred dramatic/expressive play sought out university-sponsored training opportunities. Since we already know that there was a tendency for White centers to emphasize dramatic/expressive play activities slightly more, it may be that there is an ethnic preference for types of training opportunities among centers. This will be examined later.

It is also possible that the activity preferences in centers are associated with the nature and extent of parent involvement in the center. Parents may contribute to the program decisions to the extent to which they engage in center activities. Accordingly, the activity factors were related to the measures of parent involvement as reported by parents on the Parent Interview. Here the parents were asked how many meetings they attended in the center. The meetings covered a variety of topics and represents a useful estimate of the involvement of parents with lectures, discussions, and policy making. Other questions on parent involvement included the number of times the parents reported helping at the center, the number of home visits by a representative of the center, and the number of times the parent reported interacting with the child's teacher.

However, since these were individual parent responses, it was necessary to sum the individual responses within each center to an aggregate center score for involvement in order to related this variable to the activity factors. Unfortunately, in many centers there were very few parents interview forms available because of the large amount of missing data. A standard convention was adopted which allowed for a decision as to inclusion of a center in the analysis. This standard is that at least five parents had to provide usable data from a given center in order to determine that the mean score for parent involvement could be considered a stable estimate of the involvement at that center. Fewer than five parents reporting for a given center meant that the mean of those scores could not be taken as a reasonable estimate of the center's rate of parent involvement. Using this standard, the number of centers available for analysis ranged from 34 to 44. The correlations between the activity factor scores and these mean center scores are summarized in Table Q1.23.

Examination of these four measures of involvement indicates that three of them bear no relationhip to the activities offered at the centers. However, a fourth measure, "How often did you help at the Head Start Center?" did yield a significant and revealing finding with one of the activity factors, Academic Knowledge and Skills. This relationship is significantly negative ($r=-.33, p<.05$). It is suggestive to conclude that as the emphasis on academic knowledge and skill activities increased in the centers, there was a decrease in the rate at which parents reported helping at the centers.

It is difficult to make a definitive interpretation of this finding since it was previously reported that centers in which the academic factor was highly emphasized tended to be heavily Black in enrollment and in staff. It may be that the low rate of parental helping at these centers is a function of the behavior patterns which are unique to this cultural group. It is also possible that centers which emphasize academic knowledge and skill activities tend to resist the participation of parents. It is possible that this activity emphasis involves professionally developed curricula and, in the judgement of the center staff, requires professionally trained staff to administer. This view might tend to magnify the discontinuity between professional staff and lay parents and thereby generate a barrier between center and parents that would be difficult to overcome.

Although it is not possible to choose between alternative explanations of the negative relationship between academic activities and parental rates of helping at the center on the basis of the univariate analyses reported here, it would help to understand the issues if the relationship between parent characteristics and the activity emphases at centers were examined. If parents tend not to help at academically oriented centers, it would be useful to know if these parents had any particular properties which might distinguish them from other parents. In particular, it would be useful to know something about their background and their judgments about their children and the schools to which their children go. If there are differences between the parents whose children attend academically oriented centers and those parents whose children attend other kinds of centers, then it might be possible to understand the relationship between the rate of helping at the center and the kind of activity which is preferred at the center.

There are three sets of information about parents which have been related to the activity preferences at the centers attended by their children. Per Capita Income (PCI), which is the total family income divided by the total number of adults and children in the family; and Mother's Education (MAED), which is a four point scale of less than high school, high school, less than college, and college levels of education, both constitute the measures of socio-economic status available from the data base (Table Q1.24).

The second set of information has to do with the parents expectations and judgements of the children's performance in school. There are three questions administered to parents which tap these attitudes and beliefs of the parents about their children. All three appear in Table Q1.25.

The final set of information has to do with the parents' attitudes toward school, education and the teachers of their children. These scores are derived from the judgments made by parents on the Hess Attitude Scale. These data were factored to produce principal components and, with a varimax rotation, five interpretable factors. The correlations of all five of these factors with the three activity preference factors generated by the center directors' reports are summarized in Table Q1.26.

It should be noted that the parents data used in these analyses reported here have been aggregated to center level by adding all parents scores within each center for whom data are available and dividing by the number of parents. This provides a mean score which is taken to represent the center. The standard of at least five parents available for a center was applied in generating center means so that the analyses are based on only 34 centers.

The first set of information on family background as measured by PCI and MAED shows no relationship with activities at the center. Thus we conclude that parents neither seek out or are attracted toward centers with particular activity preferences when the parents are defined by their socio-economic status as measured in this study. This is an important finding since it was earlier reported that parents tend to help out at centers which do not heavily emphasize the academic oriented activities, and as will be reported later, mothers with higher education levels tend to visit centers more often than mothers with lower educational levels. Thus the lack of a simple (univariate) relationship between mothers' education and types of center activities, while important in its own right, appears to mask a rather complex relationship among these vaiables. This more complex analyses will be reported in a later section of this report.

The same kind of null findings can be observed in the relationship between the second set of information on parents' expectations for their children and the activities at the center. Thus, the answers to such questions as "How far in school will your child go?", "How well will your child do in school?", and "How do you compare your child's school ability to other children?" are unrelated to the kind of activity which is emphasized at the center. Since these questions were asked of parents after their children graduated from Head Start, it is possible to reject the alternative hypothesis that centers with particular activity emphases tended to attract parents with particular expectations for their children. In general it appears that parents do not self select centers with particular kinds of activities and that parents do not appear to influence the selection of activity emphases in ways that reflect any of the SES or expectation/aspiration data available. If parents have any influence on the kind of activity which is offered in the Head Start centers in which their children attend, it is not associated with the attitudinal values contained in the measures reported here.

A slightly different picture emerges when the Hess factors are related to the activity emphases. Two findings of interest can be observed with these data. The first is that centers which emphasize academic knowledge and skill activities tend rather strongly to have parents with high scores on the Negative Attitude Toward School factor. This factor also includes what has been reported elsewhere in this report as a measure of external locus of control for events at school. The correlation between the Negative Attitude Toward School factor and the academic activity emphasis is .50 which is likely to be an underestimate of the true relationship between these variables because of an apparent curvilinear pattern to the bivariate scatter plot. Thus centers which emphasize academic activities are associated with parents who, when their children are in kindergarten, report quite negative attitudes toward public school and toward public school teachers. It is not clear whether centers which have these emphases also have a lack of confidence in public schools which is then communicated to parents (although parents contact with these centers is relatively low), or whether parents who have a lack of confidence in public schools tend to be attracted to these kinds of centers. The complexity of this relationship will have to be puzzled out in order to fully understand the impact of curriculum decisions and of parent involvement on judgments and ultimately on children.

The second finding involving the Hess factors has to do with the fifth factor, Positive Perceptions of the Teacher. In centers which emphasize dramatic and expressive play (and recall that these centers are located heavily in rural and farming communities), the parents have high scores on this positive factor. This may be characteristic of parents' judgments in the rural areas which are served by Head Start, or it may be an effect of this kind of activity in Head Start on the activities and attitudes of the kindergarten teachers. Once again, this complex association will have to be examined using more complex analytic procedures.

Conclusions

The findings of this section confirm the most likely expectations of the early education community that, indeed, there is a diversity of programming in the Head Start centers around the nation. There are three distinct sets of activities. Centers, according to their directors, vary considerably in the degree to which these activities are emphasized in local programs. This is as it should be since diversity means that local conditions have some contribution to local programming. In the present data base there seems to be abundant evidence that the kind of activity emphasis which is found in a center reflects the preferences of the cultural group being served and the cultural composition of the local center staff. In most cases the families being served and the staff serving them come from the same cultural/ethnic group, and the kind of activity emphasized in their center reflects their collective preferences. Black children are generally served by Black staff and the activities which predominate in their experiences have to do with academic/learning events. White children are generally served by White staff and the activity emphasis they receive tends to do with expressive/dramatic play. This implies a cultual based choice in favor of specific activity emphases.

At the same time, there is a regional basis to the distribution of activities. Academic activities predominate in centers in the South where the largest majority of Black children are in attendence and dramatic/expressive play predominate in other regions where White children are in attendence. This should be taken as further evidence for a culturally based self selection of activities in centers.

It is possible that factors outside the Head Start community contribute to decisions about the kind of activities which are emphasized in the centers. For example, White centers tend to use university-based resources for training of their staff and it may be that these training programs direct the trainees toward the dramatic/expressive activities. It is also possible that, for reasons as yet unknown, White centers prefer to go to universities for their training because they prefer the instruction offered by university personnel. It is not possible to resolve this point using the data at hand, but it is clear that activities vary across centers because of the ethnic composition of the local Head Start community.

There is one important issue which the program planner should note. Centers which emphasize academic activities are associated with low rates of parent involvement and with parents who have quite negative judgments about school. It is reasonable, based on this data base and related findings, to interpret this as a tendency of academically oriented Head Start teachers to inhibit parental contact with centers. Such teachers may tend to think of themselves as professionalized and may therefore, tend to judge parent involvement as an unwanted intrusion into their domain. Parents may in turn sense this resistence for Head Start trainers to focus on this issue and consider means of instructing teachers to recognize the value of parent involvement regardless of the teacher's preferred orientation toward preschool programming.

It is most instructive to note that none of the activity emphases are associated with any of the academic outcome measures used in this study, although there is some evidence that expressive/dramatic play is associated with one of the social/affective outcomes. In other analyses reported here, participation in preschool and, in some instances, participation in Head Start, are associated with some gains in achievement and social/affective development, but the content of the Head Start program appears not to be related to outcomes. This is counter intuitive and needs to be contrasted with findings from other studies which suggest that program content does influence child growth. It is also counter intuitive with theoretical expectations that program content should influence child growth. Findings such as these are in need of further examination before they can be included in the accumulating body of knowledge of Head Start effects. There is one technical issue which needs to be kept in mind associated with this point.

Each center director was asked to rate a variety of activities in terms of "importance in a preschool program", and the "extent to which the activity is emphasized in your center". Based on these data, scores were developed which served to describe each center according to the kind of activities which were emphasized and which were considered important. These scores were then attributed to each child who attended that center. Each child was then entered into the analyses of the effects of the center activities on kindergarten performance.

The problem with this procedure, of course, is that it assumes that each child in the center received the same activity emphasis in the same way. If every child in the center participated in these analyses, then the overall center activity emphasis would be a reasonable score for the "average" child in the center, and it would be possible to compare centers on the effectiveness of their activity emphases. Unfortunately, very few children from each center

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participated in this study. In all cases, the smallest number to participate was five, but in most cases the number of children included in the sample was 6 to 8. Thus, it is not at all possible to assume that the children in the sample all received the activities which the center director judged to be the major component of their curriculum. Children who were categorized in the present analyses as having received a certain curriculum may not have received enough of it to satisfy reasonable criteria for inclusion. There is, in other words, large error in the measurement of the curriculum when that measurement is applied to the child, even though the error may not be large when applied to the center. The analysis of effects of activities, when carried out at the child level is most likely to have too much of this kind of error to allow for a precise enough measure of the effects of these activity emphases. When studying the effects of curriculum applied to the individual child, it is necessary that the actual curriculum applied to that child be measured and that was not possible in the present study. Thus it should not be expected that effects of activities at centers could be discerned in individual child test scores. The measurement of activities could only be used in this study to describe centers, not to measure effects on children.

TABLE Q1.1

PRINCIPAL COMPONENTS ANALYSIS RESULTS FOR HEAD START ACTIVITY EMPHASES

Factor	Loading	Eigen Value	Percent of Variance
Factor I: Academic Knowledge and Skills		4.34	31.0
Mathematic Concepts	.855		
Problem Solving Activities	.786		
Science Experiences	.648		
Large Muscle Development	.586		
Factor II: Social Skills and Rule Knowledge		1.74	12.5
Health Habits	.834		
Food Habits	.815		
Health and Safety Rules	.770		
Child Social Knowledge	.474		
Factor III: Dramatic/Expressive Play		1.67	11.9
Dramatic Play	.815		
Creative Experiences	.804		
Factor IV: Muddled Factor		1.16	8.3
Small Muscle Development	.863		
Language Development	.731		
Child Social Knowledge	.469		
Factor V: Social Knowledge Skills		1.04	7.4
Trips	.820		
Adult Social Knowledge	.728		

TABLE Q1.2

Academic Knowledge and Skills by Region

	Academic Knowledge and Skill Activity Factor									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Region	N	%	N	%	N	%	N	%	N	%
Northeast	10	31.3	9	28.1	9	28.1	4	12.5	32	100.0
Southeast	2	10.5	5	26.3	6	31.6	6	31.6	19	100.0
Southwest	2	16.7	0	0.0	2	16.7	8	66.7	12	100.0
West	8	32.0	7	28.0	8	32.0	2	8.0	25	100.0

TABLE Q1.3

Social Knowledge and Skills by Region

	Social Knowledge and Skills by Region									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Region	N	%	N	%	N	%	N	%	N	%
Northeast	8	25.0	8	25.0	7	21.9	9	28.1	32	100.0
Southeast	5	26.3	3	15.8	7	36.8	4	21.1	19	100.0
Southwest	4	33.3	2	16.7	5	41.7	1	8.3	12	100.0
West	6	24.0	9	36.0	3	12.0	7	28.0	25	100.0

TABLE Q1.4

Dramatic/Expressive Play by Region

	Dramatic/Expressive Play Activity Factor									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Region	N	%	N	%	N	%	N	%	N	%
Northeast	5	15.6	9	28.1	8	25.0	10	31.3	32	100.0
Southeast	9	47.4	5	26.3	3	15.8	2	10.5	19	100.0
Southwest	2	16.7	5	41.7	4	33.3	1	8.3	12	100.0
West	5	20.0	4	16.0	7	28.0	9	36.0	25	100.0

TABLE Q1.5

Academic Knowledge and Skills by City Size

	Academic Knowledge and Skills Activity Factor									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
City Size	N	%	N	%	N	%	N	%	N	%
Farm or Open Country	9	90.0	0	0.0	0	0.0	1	10.0	10	100.0
2,500 - 25,000	7	20.0	10	28.6	7	20.0	11	31.4	35	100.0
25,000 - 100,000	4	14.8	6	22.2	12	44.4	5	18.5	27	100.0
over 100,000	1	8.3	3	25.0	6	50.0	2	16.7	12	100.0

TABLE Q1.6

Social Knowledge and Skills by City Size

	Social Knowledge and Skill Activity Factor									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
City Size	N	%	N	%	N	%	N	%	N	%
Farm or Open Country	6	60.0	1	10.0	1	10.0	2	20.0	10	100.0
2,500-25,000	7	20.0	7	20.0	14	40.0	7	20.0	35	100.0
25,000-100,000	5	18.5	12	44.4	7	25.9	3	11.1	27	100.0
Over 100,000	3	25.0	2	16.7	0	0.0	7	58.3	12	100.0

TABLE Q1.7

Dramatic/Expressive Play by City Size

	Dramatic/Expressive Play Activity Factor									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
City Size	N	%	N	%	N	%	N	%	N	%
Farm or Open Country	2	20.0	1	10.0	1	10.0	6	60.0	10	100.0
2,500-25,000	13	37.1	8	22.9	8	22.9	6	17.1	35	100.0
25,000-100,000	2	7.4	10	37.0	10	37.0	5	18.5	27	100.0
Over 100,000	2	16.7	4	33.0	3	25.0	3	25.0	12	100.0

TABLE Q1.8

Academic Knowledge and Skills by Center Ethnicity

	Academic Knowledge and Skills Activity Factor									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Center Ethnicity	N	%	N	%	N	%	N	%	N	%
Predominantly Black	3	12.5	6	25.0	6	25.0	9	37.5	24	100.0
Predominantly White	10	37.0	7	25.9	8	29.6	2	7.4	27	100.0
Predominantly Other	4	57.1	1	14.3	2	28.6	0	0.0	7	100.0
No Major Race	3	20.0	3	20.0	6	40.0	3	20.0	15	100.0

TABLE Q1.9

Social Knowledge and Skills by Center Ethnicity

	Social Knowledge and Skills Activity Factor									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Center Ethnicity	N	%	N	%	N	%	N	%	N	%
Predominantly Black	4	16.7	5	20.8	7	29.2	8	33.3	24	100.0
Predominantly White	5	18.5	7	25.9	9	33.3	6	22.2	27	100.0
Predominantly Other	5	71.4	1	14.3	0	0.0	1	14.3	7	100.0
No Major Race	2	13.3	6	40.0	2	13.3	5	33.3	15	100.0

TABLE Q1.10

Dramatic/Expressive Play by Center Ethnicity

	Dramatic/Expressive Play Activity Factor									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Center Ethnicity	N	%	N	%	N	%	N	%	N	%
Predominantly Black	8	33.3	7	29.2	7	29.2	2	8.3	24	100.0
Predominantly White	6	22.2	7	25.9	6	22.2	8	29.6	27	100.0
Predominantly Other	3	42.9	0	0.0	1	14.3	3	42.9	7	100.0
No Major Race	1	6.7	5	33.3	4	26.7	5	33.3	15	100.0

TABLE Q1.11

Academic Knowledge and Skills By Staff Ethnicity

	Academic Knowledge and Skills Activity Factor									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Staff Ethnicity	N	%	N	%	N	%	N	%	N	%
Predominantly Black	1	4.2	6	25.0	6	25.0	11	45.8	24	100.0
Predominantly White	5	27.8	7	38.9	5	27.8	1	5.6	18	100.0
No Major Race	6	37.5	2	12.5	3	18.8	5	27.8	16	100.0

TABLE Q1.12

Social Knowledge and Skills by Staff Ethnicity

	Social Knowledge and Skills Activity Factors									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Staff Ethnicity	N	%	N	%	N	%	N	%	N	%
Predominantly Black	5	20.8	6	25.0	8	33.3	5	20.8	24	100.0
Predominantly White	4	5.6	7	38.9	7	38.9	3	16.7	18	100.0
No Major Race	1	25.0	2	12.5	2	12.5	8	50.0	16	100.0

TABLE Q1.13

Dramatic/Expressive Play by Staff Ethnicity

	Dramatic/Expressive Play Activity Factor									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Staff Ethnicity	N	%	N	%	N	%	N	%	N	%
Predominantly Black	6	25.0	7	29.2	7	29.2	4	16.7	24	100.0
Predominantly White	4	22.2	3	16.7	6	33.3	5	27.8	18	100.0
No Major Race	3	18.8	4	25.0	5	31.3	4	25.0	16	100.0

TABLE Q1.14

Academic Knowledge and Skills by Ethnic Match of Children and Staff

	Academic Knowledge and Skills Activity Factor									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Ethnic Match	N	%	N	%	N	%	N	%	N	%
Predominantly Black	1	5.9	4	23.5	4	23.5	8	47.1	17	100.0
Predominantly White	4	33.3	4	33.3	3	25.0	1	8.3	12	100.0
No Major Race	2	28.6	0	0.0	3	42.9	2	28.6	7	100.0

TABLE Q1.15

Social Knowledge and Skills by Ethnic Match of Children and Staff

	Social Knowledge and Skills Activity Factor									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Ethnic Match	N	%	N	%	N	%	N	%	N	%
Predominantly Black	3	17.6	4	23.5	6	35.3	4	23.5	17	100.0
Predominantly White	1	8.3	3	25.0	6	50.0	2	16.7	12	100.0
No Major Race	1	14.3	1	14.3	1	14.3	4	57.1	7	100.0

TABLE Q1.16

Dramatic/Expressive Play by Ethnic Match of Children and Staff

Dramatic/Express Play Activity Factor

	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Ethnic Match	N	%	N	%	N	%	N	%	NN	%
Predominantly Black	5	29.4	5	29.4	5	29.4	2	11.8		100.0
Predominantly White	3	25.0	2	16.7	5	41.7	2	16.7		100.0
No Major Race	0	0.0	3	42.9	2	28.6	2	28.6		100.0

TABLE Q1.17

Academic Knowledge and Skills by Auspices

Academic Knowledge and Skills Activity Factor

	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Auspices	N	%	N	%	N	%	N	%	N	%
Public Schools	0	0.0	2	25.0	4	50.0	2	20.0	8	100.0
College or Univ.	0	0.0	4	100.0	0	0.0	0	0.0	4	100.0
Religious Group	0	0.0	1	50.0	1	50.0	0	0.0	2	100.0
Non-Profit Group	1	11.1	2	22.2	3	33.3	3	33.3	9	100.0
Local CAA	21	36.2	11	19.0	15	25.9	11	19.0	58	100.0
Other	0	0.0	1	14.3	2	28.6	4	57.1	7	100.0

TABLE Q1.18

Social Knowledge and Skills by Auspices

	Social Knowledge and Skills Activity Factor									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Auspices	N	%	N	%	N	%	N	%	N	%
Public Schools	3	37.5	1	12.5	1	12.5	3	37.5	8	100.0
College or Univ.	0	0.0	0	0.0	4	100.0	0	0.0	4	100.0
Religious Group	1	50.0	1	50.0	0	0.0	0	0.0	2	100.0
Non-Profit Group	5	55.6	3	33.3	1	11.1	0	0.0	9	100.0
Local CAA	12	20.7	15	25.9	14	24.1	17	29.3	58	100.0
Other	2	28.6	2	28.6	2	28.6	1	14.3	7	100.0

TABLE Q1.19

Dramatic/Expressive Play by Auspices

	Dramatic/Expressive Play Activity Factor									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Auspices	N	%	N	%	N	%	N	%	N	%
Public School	1	12.5	2	25.0	4	50.0	1	12.5	8	100.0
College or Univ.	4	100.0	0	0.0	0	0.0	0	0.0	4	100.0
Religious Group	0	0.0	1	50.0	0	0.0	1	50.0	2	100.0
Non-Profit Group	0	0.0	0	0.0	6	66.7	3	33.3	9	100.0
Local CAA	14	24.1	17	29.3	10	17.2	17	29.3	58	100.0
Other	2	28.6	3	42.9	2	28.6	0	0.0	7	100.0

TABLE Q1.20

ACADEMIC KNOWLEDGE AND SKILLS BY TEACHER TRAINING

	Academic Knowledge and Skills Activity Factor									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Teacher Training	N	%	N	%	N	%	N	%	N	%
Inservice by Supervisors	22	25.3	21	24.1	24	27.6	20	32.0	87	100.0
Inservice by Consultants	22	25.6	20	23.3	25	29.1	19	22.1	86	100.0
University Training 8-Weeks	2	18.2	3	27.3	5	45.5	1	9.1	11	100.0
University Training 1-Week	9	40.9	5	22.7	4	18.2	4	18.2	22	100.0
Lectures by Specialists	17	23.0	20	27.0	23	31.1	14	18.9	74	100.0
After Hour Classes at School	16	22.9	16	22.9	21	30.0	17	24.3	70	100.0

TABLE Q1.21

SOCIAL KNOWLEDGE AND SKILLS BY TEACHER TRAINING

	Social Knowledge and Skills Activity Factor									
Teacher Training	N	%	N	%	N	%	N	%	N	%
Inservice by Supervisor	23	26.4	22	25.3	22	25.3	20	23.0	87	100.0
Inservice by Consultants	22	25.6	22	25.6	21	24.4	21	24.4	86	100.0
University Training 8-Weeks	2	18.2	3	27.3	1	9.1	5	45.5	11	100.0
University Training 1-Week	9	40.9	6	27.3	3	13.6	4	18.2	22	100.0
Lectures by Specialists	16	21.6	20	27.0	20	27.0	18	24.3	74	100.0
After Hour Classes at School	17	24.3	18	25.7	17	24.3	18	25.7	70	100.0

TABLE Q1.22

DRAMATIC/EXPRESSIVE PLAY BY TEACHER TRAINING

	Dramatic/Expressive Play Activity Factor									
	Quartile 1		Quartile 2		Quartile 3		Quartile 4		Total	
Teacher Training	N	%	N	%	N	%	N	%	N	%
Inservice by Supervisors	20	23.0	23	26.4	22	25.3	22	25.3	87	100.0
Inservice by Consultants	21	24.4	22	25.6	22	25.6	21	24.4	86	100.0
University Training 8-Weeks	2	18.2	4	36.4	1	9.1	4	36.4	11	100.0
University Training 1-Week	5	22.7	2	9.1	3	13.6	12	54.5	22	100.0
Lectures by Specialists	18	24.3	21	28.4	18	24.3	17	23.0	74	100.0
After Hour Classes at School	16	22.9	19	27.1	17	24.3	18	25.7	70	100.0

TABLE Q1.23

CORRELATIONS OF ACTIVITY FACTORS WITH MEAN PARENT INVOLVEMENT INDICES

	N	Academic Knowledge & Skills Activity	Social Knowledge & Skills Activity	Dramatic/Expressive Play Activities
Parent meet with other parents	34	-0.1190	0.1399	-0.1344
Parents help at Head Start Center	35	-0.3309**	0.0299	0.0317
Number of home visits by center rep.	35	0.2033	0.2193	0.1415
Number of times talk with teacher	44	-0.0864	-0.1413	-0.0884

** p<.01

TABLE Q1.24

CORRELATIONS OF ACTIVITY FACTORS WITH MEAN SES INDICES

	N	Academic Knowledge & Skills Activity	Social Knowledge & Skills Activity	Dramatic/Expressive Play Activities
Mother's Education	36	-0.0917	0.0128	0.0594
Per Capita Income	28	-0.0078	-0.0175	0.1594

TABLE Q1.25

CORRELATIONS OF ACTIVITY FACTORS WITH PARENT EXPECTATIONS

		Activity Factors		
Parent Expectations	N	Academic Knowledge & Skills Activity	Social Knowledge & Skills Activity	Dramatic/Expressive Play Activity
How far in school will your child go?	33	-0.1548	0.0798	-0.1241
How well will your child do in school?	35	0.0166	-0.1501	0.0351
How do you compare your child's school ability to other children?	34	-0.0572	0.0500	-0.1148

TABLE Q1.26

CORRELATIONS OF ACTIVITY FACTORS WITH MEAN PARENTAL ATTITUDES (N=15)

	Academic Knowledge & Skills Activity	Social Knowledge & Skills Activity	Dramatic/Expressive Play Activity
School Negativism	0.5056*	-0.0824	-0.2113
Value of Education	-0.0238	-0.0436	0.1707
Education as Upward Mobility	0.1725	-0.0148	-0.4817*
Social Traditionalism	-0.2513	0.1648	0.3808
Positive Perception of Teachers	0.1994	-0.2949	0.5317*

* p<.05

Question 2: Ethnic Composition of Families Served by Head Start

The original analyses indicated that Head Start centers varied with regard to the ethnic mix of the families enrolled. A number of important issues about the sources of such variation, the continuity (or discontinuity) of ethnic mix across Head Start and the public schools in which the Head Start children enrolled, and the consequences of these various kinds of ethnic experiences were not considered in the original analyses. The purpose of the present analyses is to provide a more detailed examination of the characteristics of centers with different ethnic mixes and the relationship between center ethnic mix and the public school classroom mix. In addition, the present analyses considers the effects of ethnic mix on child academic and social development, peer adjustment, and parental attitudes toward the public schools.

In order to consider these issues, the ethnic mix of both centers and the public school classrooms were described in terms of percent of various ethnic groups. The following descriptors were used (Note, these descriptors are in some cases aggregations of the raw data categories described in Chapter 3 and on page 64 of this chapter.):

1. 90% or more of one ethnic group= homogeneous group, referred to as a Black center or a White classroom, as the case may be.
2. 70-100% of one ethnic group= predominantly one ethnic group, referred to as predominantly Black, or predominantly White as the case may be.
3. At least 50% of one ethnic group= majority of one ethnic group.
4. No predominant group= group in which no ethnicity achieves more than 50% enrollment. This occurs when two ethnic groups are equally represented, or

when there are three ethnicities represented in the groups, none of which achieves 50% of the total.

The ethnic groups reported here are Blacks, Whites, and Other. This latter category is almost exclusively Hispanics. Although the Hispanic children are reported in the summary tables according to their country of origin (Puerto Rico, Cuba, or Mexico), for analytic purposes they have been combined into one group. Since the analyses were separately performed within the several geographic regions of the country, there is very little overlap between Puerto Rican, Cuban or Mexican-American children in the analyses.

What are the racial/ethnic mixes of the public school classes into which the Head Start children enter?

Approximately two-thirds of both Black and White children attend a public school class with a predominance (at least 70%) of children of their own ethnic background (Table Q2.1). That is, 56.4% of all Black Head Start children attended kindergarten classes with 90% or more Black children in them, and 11.7% of all Black children attended kindergarten classes with 70% or more Black children. Similarly, 54.4% of all White Head Start children attended kindergarten classes with 90% or more White children in them, and 13.5% of all White children attended kindergarten classes with 70% or more White children. In addition, 63.7% of the Black Head Start children attended centers with 90% or more Black children in them. Of these children, 51.1% attended kindergarten classes with 90% or more Black enrollment. As in the case of the Black children, a majority (53.1%) of the White children attended centers with at least 90% White children. Of these children 60.0% attended kindergarten classes with 90% or more White children.

Are there systematic differences in child outcome measures between the children from centers with different racial/ethnic mixes?

There are no systematic differences in child outcomes, with respect to reading, math or social measures which can be attributed to differences in the ethnic composition of centers.

When Head Start children enter elementary school classes with racial/ethnic composition different from the Head Start center do they experience any problems of peer adjustment as measured by the Schaefer Hostility/Tolerance and the Bellar Aggression rating scales?

When comparing children who encounter continuity in ethnic composition of Head Start Center and elementary school class with children who attended an elementary class with a different ethnic composition then their Head Start Center, there are no apparent differences on either of the peer adjustment measures. It should be noted that 79% of the children maintained continuity of ethnic composition from their preschool situation to their elementary school class.

Are there differences in parental attitudes toward school, or educational aspirations or expectations, which are associated with ethnic composition of centers?

80

In general, parents with children in 90% or more Black or 90% or more White centers expect that their children will acquire more education than other parents. Parents of children who attended 90% or more Black centers tend to show more external locus of control than do other parents and to have more negative attitudes toward public schools. Parents of children who attend White centers have positive attitudes toward school, but do not view education as a means for upward mobility or as a method to perpetuate social traditionalism.

Technical Discussion

Comparisons of ethnic composition of preschool and school indicate consistency during this transition period. Of interest are comparisons of child ethnicity and ethnic composition of center, as well as comparisons of child ethnicity and ethnic composition of the child's class. With respect to Head Start children it is desirable to know if there are systematic differences in parental attitudes and expectations which can be associated with the ethnic composition of the child's Head Start Center. Center ethnic composition is defined in terms of the following ten categories: (1) 90% and up Black, (2) 90% and up White, (3) 90% and up other, (4) 70-89% Black, (5) 70-89% White, (6) 70-89% other, (7) less than 70% Black, (8) less than 70% White, (9) less than 70% other, (10) no Predominte race.

Of the 835 children for whom a kindergarten teacher reported the ethnicity of class, 392 are Black and 443 are White. For this sample, approximately two thirds of both Black and White students attended a class with a predominance (at least 70%) of children of their own ethnicity (Tables Q2.1 and Q2.2.). Of the 441 children for whom a center director reported the ethnicity of the Head Start center, 81.4% of the Black students and 69.5 of the White students attended centers with at least 70% of the same ethnicity (Table Q2.3.). The trend toward greater homogeneity of ethnic composition in centers than in public school classes is consistent throughout the sample.

Generally, for those children who were included in this portion of the analysis, ethnicity of the child matched the ethnicity of the center (not the individual Head Start classroom). There was a great deal of missing data. In addition, there are no data on the ethnic composition of the individual Head Start classrooms. Center directors were asked to report only the composition of the whole center One must assume that center ethnic composition is representative of the individual classes in that Head Start Center. Approximately half (46.7%) of the 150 Black students for whom center and kindergarten ethnicity data were available attended centers and kindergartens with Black enrollments. Seventy percent of the Black students, who attended Head Start Centers with at least 90% Black enrollment, attended classes with at least 90% Black students. Approximately half (51.6%) of the students, who attended centers with an ethnic composition containing 70% to 89% Blacks attended classes with at least 70% Black enrollment. Similarily for White students who had attended predominately White Head Start centers, 85.7% of those with experience in centers with at least 90% White students went on to a public school class containing at least 90% White students. Most (83.3%) of the 30 students from centers with at least 70% White ethnic composition attended classes having at least 90% White students.

There are proportionally more Black students in the Southeast than in the other regions. In the Southeast, Blacks generally attend predominately Black centers; consequently, the Southeast has proportionally more students in each preschool experience category attending classes with at least 70% Black enrollment. Regional comparisons between center and class ethnicity for Black students are consistent with across-regional findings. That is, most Blacks attend predominately Black centers (at least 90% Black enrollment).

This accounts for 56.0% of the Black students in the Southeast and 32.2% of the Black students in the other three regions. Regarding the White students, 41.7% in the Southeast and 45.9% in the other regions attended both centers and classes with at least a 90% White enrollment.

The unadjusted relationships between three sets of child outcomes (reading, math, and social measures) and center ethnicity were examined (Table Q2.4). Within and among the three types of child outcomes there are no systematic differences associated with center ethnicity. There are a few small and tentative trends with respect to individual outcomes. Children from a majority Other (Hispanic and Native American) centers score highest (unadjusted) on "Expressive Language." These children also have the highest scores on "copying symbols" whereas the majority Black centers have the lowest scores on this measure.

All math measures, except "identifying simple numbers", vary with respect to center ethnicity. On simple computation, predominately Other centers (centers having at least 70% Other ethnic composition) have the lowest mean scores. However, on "verbal problem solving", those same predominately Other centers have the highest scores. On "counting" (i.e., counting objects) centers with less than 70% any race but with a majority of Blacks or Others, represent the lowest scores whereas the centers with less than 70% any race and with a White majority have the highest mean mean scores on this measure.

Children from centers having 70-89% Other children score higher on "All American" than other children, and children from centers having less than 70% of any race but with a majority of Others tend to score the lowest on "Assestiveness."

For this portion of the study, two measures of peer adjustment are utilized, the Schaefer Hostility/Tolerance and the Bellar Aggression rating scales. Low scores on both measures indicate positive peer adjustment. Both Black and White children were categorized with respect to the ethnic composition of their Head Start center and of their class. Seven categories were identified: (1) Black child who went from a 90% or more Black center to an elementary class with less than 70% Black enrollment, (2) Black child who went from a center with 50-70% Black to a class with less than 50% Black enrollment, (3) White child who went from a White center to an elementary class with less than 70% White enrollment, (4) White child who went from a 50-70% White center to a class with less than 50% White enrollment, (5) any child who changed to a group with no ethnic predominance (6) Black child whose preschool and elementary ethnic compositions matched, and (7) White child whose school experiences were of matching ethnic composition.

Over three-fourths (79%) of the Black and White Head Start children included in this portion of the study had matching ethnic environments with respect to preschool and elementary school class ethnicity. When comparing matched versus nonmatched children, there are no overt differences among levels of matching and nonmatching on either the Hostility/Tolerance or Aggression scales (Table Q2.5). Continuity, or lack thereof, of the ethnic composition related to Head Start Center and elementary school class is not related to peer adjustment as judged by public school teachers.

There are thirteen measures of parental attitudes and expectations with respect to their child's academic ability and achievement. Single questions from the parent inventory which examine the parent's perceptions of their child's academic ability and reflects the parent's expectations for their child's achievement are (1) "How well do you think your child will do in school?", (2) "How far do you think your child will get in school?", and (3) "Compared to other children, rate your child's general ability." The remaining eight variables of parental attitude and/or expectations are composites of variables which were created by either summation of two or more variables, or factor analysis. Summative creations were: (1) Parental Expectation I, which is a composite of "how well" and "how far" their child will do in school, (2) Parental Expectation II, which is Parental Expectation I combined with the parent's ratings of his child's academic ability, (3) General Locus of Control Scale, (4) School Locus of Control, which is a summation of the following items: (a) "If I disagree with the principal, there is nothing or very little I can do," (b) "Most teachers do not want to be bothered by parents coming to see them" and (c) "Parents can do very little to improve the schools", and (5) total locus of control (LOCUSTOT) which is a composite of general and specific (school) locus of control. Five components resulted from a principal components analysis of the Hess items. These five components, (1) School negativism; (2) Value of education; (3) Education as upward mobility; (4) Social traditionalism for children; and (5) Positive Perceptions of teachers, were also included in the comparisons of parental attitudes of expectation over categories of center ethnicity.

Of the single questions, for two of the three there is no apparent difference in the ratings with respect to the student ethnic composition of the Head Start Center. Parents with children in centers with at least 90% of any race, or ranging from 70-89% of an ethnic composition other than White or Black, on the average expect their children to obtain more education than parents from other types of centers (Table Q2.6). There are no differences attributed to center ethnicity on the variables, Parental Expectations I or II. However, Parents with children who attended centers with at least a 90% majority other than White or Black perceive their locus of control as being more external, and those parents with children from centers with 70-89% White enrollment perceive their locus of control as being more internal than do parents with children who attended other types of Head Start Centers (Table Q2.7).

A higher proportion of parents representing prodominately (70%-90%) Black and and other Head Start Centers describe themselves as being external compared to parents associated with predominately (at least 70%) White centers. However only 11.6% of all parents describe themselves as "external" so these findings cannot be considered stable.

With respect to the Hess principal components factor scores, all scores except "Positive perceptions of teachers", indicated differences associated with the ethnic type of Head Start Center. Parents from predominately White centers (at least 70% White) had more positive attitude toward school, and place a lesser value upon education, than do parents from other kinds of centers (Table Q2.8). Finally, parents associated with predominately White centers do not view education as a means for upward mobility or as a method to perpetuate social traditionalism to the extent that parents from other centers do.

Conclusions

The intent of this question is to determine the effects of the ethnic composition which children experience in Head Start on their adjustment and performance in kindergarten. The ethnic composition of the kindergarten into which they enroll is a critical factor in examining this adjustment process, so it is important to consider the match between the preschool and kindergarten ethnicity. Unfortunately, there was a great deal of missing data here so that the number of children for whom this match could be calculated is quite low. Although there is no clear evidence for a bias in the loss of data, it is clear that the real problem is that there is such a small absolute number of children from whom a shift in the ethnic composition ocurred in the transition from Head Start to kindergarten. Most of the children in this sample went to a Head Start that had a predominant enrollment of children of the same ethnic background, and they went to a kindergarten that was very similar in composition to the Head Start they attended. Head Start appears, in this sample, to reflect the ethnic composition of the neighborhoods they serve as much as the public schools. The finding that there were no discernible differences between children who attended one kind of ethnically mixed center and another kind of kindergarten on any of the outcome measures compared to children who had other kinds of transitional experiences, is strongly influenced by this unbalanced sample.

The process by which ethnic mix in an educational environment has an impact on the development of children is not limited to the direct experiences of the children in the classroom. It is also possible that parents may be influenced by, or may self select classrooms and Head Starts of various ethnic compositions. Once they are influenced, the impact on the children may occur by way of the home rather than by way of the classroom. Thus it is important that the attitudinal properties of the parents associated with ethnic composition be explored. In this sample, there were no discernible differences among parents which could not more appropriately be attributed to ethnic background of the family rather than ethnic composition of the educational setting.

Once again, it is very important to heed the warning that the very unbalanced sample precludes the possibility of discovering anything but the most obvious effects. It is most important to avoid drawing policy implications from these findings. The present data base simply does not support any conclusion on the relative worth of any particular ethnic mix for preschool children.

TABLE Q2.1

Class Ethnic Composition by Child's Ethnic Background (Count (%))

Child's Ethnicity	Class Ethnicity						
	70% Up Black	70% Up White	70% Up Other	70% Black	70% White	70% Other	No Predominately Race
Black	267 (68.1)	33 (8.4)	0 (0.0)	29 (7.4)	33 (8.4)	3 (0.8)	27 (6.9)
White	6 (1.4)	301 (67.9)	18 (4.1)	9 (2.0)	53 (12.0)	0 (0.0)	56 (12.6)

TABLE Q2.2. Class Ethnic Composition by Child's Ethnic Background (Count and (Percent))

Region	Child's Ethnicity	Class Ethnicity										
		90% Up Black	90% Up White	90% Up Other	70-89% Black	70-89% White	70-89% Other	70% Black	70% White	70% Other	No Predominate Race	TOTAL
All Regions	Black	221 (56.4)	9 (2.3)	0 (0)	46 (11.7)	24 (6.1)	0 (0)	29 (7.4)	33 (8.4)	3 (.8%	27 (6.9)	392 (46.9)
	White	2 (5)	241 (54.4)	14 (3.2)	4 (.4)	60 (13.5)	4 (.9)	9 (2.0)	53 (12.0)	0 (0)	56 (12.6)	443 (53.1)
Northeast, Southwest, & West	Black	61 (41.2)	7 (4.7)	0 (0.)	17 (11.5)	19 (12.8)	0 (0)	15 (10.1)	17 (11.5)	3 (2.0)	9 (6.1)	148 (27.6)
	White	2 (.5)	228 (58.6)	14 (3.6)	0 (0)	58 (14.9)	4 (1.0)	5 (1.3)	34 (8.7)	0 (0)	44 (11.3)	389 (72.4)
Southeast	Black	160 (65.6)	2 (.8)	0 (0)	29 (11.9)	5 (2.0)	0 (0)	14 (5.7)	16 (6.6)	0 (0)	18 (7.4)	244 (81.9)
	White	0 (0)	13 (24.1)	0 (0)	2 (7.4)	2 (3.7)	0 (0)	4 (7.4)	19 (35.2)	0 (0)	12 (22.2)	54 (18.1)

TABLE Q2.3. Head Start Center Ethnic Composition by Child's Ethnic Background (Count and (Percent))

		Center Ethnicity										
Region	Child's Ethnicity	90% Up Black	90% Up White	90% Up Other	70-89% Black	70-89% White	70-89% Other	70% Black	70% White	70% Other	No Predominate Race	TOTAL
All Regions	Black	137 (63.7)	0 (0)	0 (0)	38 (17.7)	2 (19)	0 (0)	11 (5.1)	12 (5.6)	2 (.9)	13 (6.0)	215 (48.8)
	White	1 (.4)	120 (53.1)	4 (1.8)	16 (7.1)	37 (16.4)	2 (.9)	8 (3.5)	27 (11.9)	1 (.4)	10 (4.4)	226 (51.2)
Northeast, Southwest, & West	Black	44 (44.4)	0 (0)	0 (0)	24 (24.2)	2 (2.0)	0 (0)	11 (11.1)	3 (3.0)	2 (2.0)	13 (13.1)	99 (33.1)
	White	0 (0)	110 (55.0)	4 (2.0)	10 (5.0)	37 (18.5)	2 (1.0)	8 (4.0)	18 (9.0)	1 (.5)	10 (5.0)	200 (66.9)
Southwest	Black	93 (80.2)	0 (0)	0 (0)	14 (12.1)	0 (0)	0 (0)	0 (0)	9 (7.8)	0 (0)	0 (0)	116 (81.7)
	White	1 (3.8)	10 (38.5)	0 (0)	6 (23.1)	0 (0)	0 (0)	0 (0)	9 (34.6)	0 (0)	0 (0)	26 (18.3)

TABLE Q2.4. Breakdowns of Child Outcomes (Means and Standard Deviations) by Head Start Center Composition

	CENTER ETHNICITY																			
	90% Up Black (n=160)		90% Up White (n=138)		90% Up Other (n=26)		70-89% Black (n=65)		70-89% White (n=50)		70-89% Other (n=16)		Less than 70% Black (n=25)		Less than 70% White (n=50)		Less than 70% Other (n=13)		No Major Race (n=33)	
CHILD OUTCOMES	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s
Spell and Read Words	-0.04	0.58	-0.18	0.67	- 0.16	0.84	-0.09	0.49	- 0.08	0.65	- 0.17	0.60	- 0.20	0.26	- 0.04	0.57	- 0.27	0.17	- 0.23	0.30
Name Letters	0.06	0.98	-0.07	1.01	0.09	1.10	-0.29	1.05	-0.08	1.05	0.19	0.98	-0.14	1.07	-0.01	1.06	-0.92	0.84	-0.53	0.98
Copy Marks	-0.20	1.09	-0.08	0.99	0.15	0.71	-0.05	1.10	-0.13	1.16	-0.17	0.86	-0.55	1.25	0.19	0.88	0.34	0.89	0.14	0.96
Letter Recognition	-0.10	1.34	0.06	0.86	-0.08	1.68	-0.08	1.19	-0.14	1.17	-0.19	1.15	-0.30	1.32	0.07	0.66	0.20	0.57	-0.09	0.71
Written Math	0.10	0.98	-0.21	0.70	-0.57	0.38	-0.11	0.84	-0.08	0.91	-0.59	0.25	-0.25	0.38	0.15	1.14	-0.26	0.35	-0.37	0.42
Oral Math I (Easy)	-0.05	1.06	-0.04	1.07	0.31	0.65	-0.12	1.11	-0.01	1.12	0.23	0.66	-0.30	1.22	0.04	1.04	-0.76	1.41	-0.36	1.31
Oral Math II (Difficult)	-0.18	0.90	0.09	1.07	0.34	0.99	-0.18	1.01	-0.04	1.04	0.34	0.96	-0.40	1.00	-0.32	0.91	-0.66	0.84	0.01	0.94
Counting	0.18	0.93	-0.21	1.09	0.03	0.76	-0.16	1.05	-0.01	0.90	-0.08	0.79	-0.37	1.30	0.23	0.64	-0.31	2.09	0.11	1.10
All American	-0.07	0.94	-0.18	1.03	-0.10	1.05	-0.00	1.05	-0.19	0.88	1.15	0.41	0.01	0.82	-0.58	0.96	0.06	0.88	0.00	1.12
Assertive	0.01	0.99	0.15	0.94	-0.09	0.89	-0.12	0.95	0.69	1.02	-0.13	0.34	0.34	0.82	0.14	1.29	-0.34	0.91	0.14	1.06

TABLE Q2.5. Breakdowns of Schaefer Hostility/Tolerance and Bellar Aggression Rating Scales by Type of Match of Preschool Elementary School Ethnicity

TYPE OF MATCH	Hostility/Tolerance			Aggression		
	n	$\overline{x}$	s	n	$\overline{x}$	s
Black Child Segregated to less than Segregated or Minority Status	27	9.26	4.36	30	10.27	6.45
Black Child Integrated to Minority Status	4	9.50	3.42	4	7.75	4.79
White Child Minority to Majority Status	7	9.14	2.73	8	9.12	5.89
White Child Majority to Minority Status	3	10.67	2.08	4	6.00	1.63
Black or White Child Changed to an Integrated Setting	17	8.53	3.16	16	6.94	3.42
Black Child Matched Environment	100	8.69	4.97	99	8.05	6.00
White Child Matched Environment	118	9.52	4.57	118	9.20	6.16

TABLE Q2.6. Breakdowns of Measures of Parental Expectations for their Children by Head Start Center Ethnic Composition

CENTER ETHNICITY

	90% Up Black		90% Up White		90% Up Other		70-89% Black		70-89% White		70-89% Other		Less than 70% Black		Less than 70% White		Less than 70% Other		No Major Race	
	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s
Parental Expectations																				
How well will kid do in school?	2.97	0.72	2.73	0.76	3.00	0.59	2.79	0.78	2.84	0.75	3.00	0.84	2.91	0.97	2.73	0.69	2.70	0.48	3.15	0.83
How far will kid do in school?	2.87	0.98	2.70	0.82	2.89	0.96	2.57	0.84	2.67	0.82	2.88	0.93	2.55	0.89	2.51	0.86	2.00	0.00	2.79	0.82
Kid's ability compared to others?	2.21	0.43	2.21	0.55	2.22	0.43	2.24	0.57	2.36	0.49	2.50	0.51	2.23	0.61	2.16	0.53	2.10	0.32	2.44	0.56

TABLE Q2.7. Frequencies of Locus of Control as Perceived by Parents of Head Start Children Illustated by Center Ethnic Composition

	CENTER ETHNICITY										
Locus of Control	90% Up Black	90% Up White	90% Up Other	70-89% Black	70-89% White	70-89% Other	Less than 70% Black	Less than 70% White	Less than 70% Other	No Major Race	TOTAL
Related to Life in General											
Internal	71	93	9	37	38	11	13	34	5	23	339
External	45	21	8	20	4	6	7	9	3	5	128
Related to School											
Internal	92	106	14	48	37	17	17	37	5	23	396
External	28	2	3	6	3	1	4	1	3	1	52

TABLE Q2.8. Breakdowns of Measures of Parental Attitudes Toward School (Means and Standard Deviations) by Head Start Center Composition

CENTER ETHNICITY

Parental Attitudes	90% Up Black (n=88)		90% Up White (n=69)		90% Up Other (n=13)		70-89% Black (n=41)		70-89% White (n=22)		70-89% Other (n=14)		Less than 70% Black (n=17)		Less than 70% White (n=34)		Less than 70% Other (n=3)		No Major Race (n=14)	
	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s	$\bar{x}$	s
School Negativism	0.58	1.29	-0.39	0.50	0.34	1.46	0.14	1.02	-0.30	1.05	-0.10	0.60	-0.05	0.80	-0.27	0.69	0.56	0.70	0.11	1.27
Value of Education	0.30	0.92	-0.31	1.03	-0.21	0.58	0.40	0.81	-0.16	1.14	-0.30	0.70	0.11	0.81	-0.20	0.95	0.12	0.73	-0.24	0.89
Education as Upward Mobility	0.22	0.82	-0.11	1.05	0.37	0.79	0.51	0.78	-0.43	0.91	-0.05	1.14	0.33	0.97	0.33	0.85	0.68	0.58	0.12	1.19
Social Traditionalism for Children	0.22	1.06	-0.10	0.96	-0.00	0.97	-0.07	1.04	-0.24	0.81	-0.31	1.03	-0.32	1.28	0.08	0.99	-1.42	0.38	-0.01	0.86
Positive Perception of Teachers	-0.08	1.12	0.22	0.70	0.04	1.13	-0.18	1.15	0.26	0.73	-0.18	0.97	-0.00	1.22	0.20	0.76	0.56	0.16	-0.07	0.94

Question 3: Ethnic Composition of Staff Participating in Head Start

The original analysis of the distribution of staff ethnicity within staff positions indicated an almost equal representation of Black and White staff (47.3% and 44.4% respectively), and the ethnic compositions were generally equal at all staff levels. However, the degree to which there is ethnic representativeness across staff levels within centers was not addressed. It is therefore the task of this secondary evaluation to examine the data relevant to the issue of ethnic representation within centers at all levels of staffing.

> To what extent are staff with different ethnic backgrounds represented at the staff level within individual centers?

Although there are relatively equal percentages of Blacks and Whites found at all levels of center staffing in the total group of centers, when staff ethnicities of individual centers are examined, three-fourths of these centers tend to be composed of 80 to 100 percent of a single ethnic group.

> For those centers which have a racial/ethnic mix at the staff level, are there systematic patterns of ethnic staffing or do different ethnic staff tend to be distributed across all levels (e.g., supervisor, teacher, aide)?

The composition of staff within individual centers tends to be of a single ethnic group across all staff levels. In centers where some racial/ethnic mix of staff does occur, there is no systematic pattern of ethnic staffing. There are occasional instances of White teachers working with Black aides, or Black teachers working with White aides.

Are there systematic patterns of ethnic staffing across types of sponsorship?

Centers under the auspice of local Community Action Agencies (CAA's) utilize staffs with a great variation in racial/ethnic mix, while public school operated centers tend to utilize White staffs and the remaining centers tend to employ Black staffs.

Does the staff composition generally match the ethnic composition of the Head Start children for individual centers? Do those centers without a match tend to be located in any particular region or in any community type?

There is a strong consistent match between the ethnic composition of staff and children in individual centers in this sample. Where non matches do occur, the typical situation is of an ethnically integrated staff serving either an all Black or all White group of children. A few instances of non match between staff and children showed an all White staff serving a mixed group of children. These few non matches are not systematically found in any particular region or community type.

Technical Discussion

Initial analyses examined the racial/ethnic mix of the ethnic staff within a particular center. Approximately two thirds of the Head Start centers had staff ethnicity data. A composite staff ethnicity variable was created by calculating the proportion of Black, White and Other ethnic staff members across all levels of staffing, and classifying the center into one of four categories: (1) predominantly Black

(70% of more Black staff) (2) predominantly White (70% or more White staff), (3) predominantly Other (70% or more Hispanic, Native American, Asian staff), and (4) no predominant race (less than 70% of any particular race). It should be noted that this staff ethnicity variable was not calculated on full time equivalent staffing but on the basis of information provided by the project director with respect to ethnicity of all the staff members. Table Q3.1 shows the number of centers classified in each category.

It appears that while the number of Blacks and Whites found at all levels of center staffing combined is almost equal for the entire sample, when individual center staff ethnicity is examined, quite another picture emerges. Of the 67 centers having staff ethnicity data, almost three-fourths of these centers had staffs composed primarily of a single ethnic group. Thirteen of these centers were 90 percent or more White and nine centers had 90 percent or more Black staff members.

Table Q3.2 displays the distribution of staff ethnicity within staff positions. The ethnic composition at each staff level for individual centers was classified into the same four categories as those of the composite staff ethnicity variable. The number of centers having a predominant ethnic group at any one staff position was considerably greater than the numbers of centers having racially balanced staffing at a particular position. Only 43 centers provided ethnic information on their supervisory staff with almost one-half (48.8%) having predominantly Black supervising staffs. Fifteen centers employed predominantly White supervisory staffs while seven centers were supervised by staff with some ethnic balance. Generally this trend continues at all staff levels. The proportion of centers having predominantly Black or White teaching staff is relatively equal (37.3% and 34.3% respectively), while the proportion of centers utilizing predominately Black aides is slightly higher than those using predominantly White aides (44.8% and 34.3%

respectively). The proportions of centers having no predominant race at each of the three staff levels, supervisor, teacher, and aide remain relatively low (16.3%, 22.4% and 16.4% respectively) compared to the proportion of centers employing staff generally composed of one racial group. These percentages, however, do not examine totally the degree to which there is ethnic representativeness across staff levels within centers.

In order to examine the ethnic staffing patterns of a particular center, the ethnicity of staff at all three levels must be examined concurrently. Table Q3.3 displays the ethnic composition of the total staff by the ethnic categories for each staff level. As one might expect, those centers with a composite staff of one predominant ethnic group have a large proportion of members of that ethnic group at each level of staffing. Those centers with 70 percent or more of Black staff members will tend to have Black supervisors, Black teachers, Black aides, while those centers with predominantly White staffs will tend to have White staff at each staffing level. However, there were 18 centers in whose composite staff no ethnic group was dominant. Half of these mixed centers were composed of ethnically mixed staff within each of the staff levels (i.e., supervisory, teaching, aide) and half (9) were composed of staff which were homogeneous within level but mixed across levels. Thus, only 9 centers in this sample were ethnically mixed at the level of professional status.

Overall, it appears that the ethnic composition of the staff within individual centers tends to be homogeneous and that this ethnic configuration is apparent at all staff levels. If the staff is primarily Black then the supervisors, teachers, and aides will tend to be Black. The same phenomena occurs in centers with predominantly White staffs. In centers where some racial/ethnic mix does occur, there are some instances where White teachers are working with Black aides, or Black teachers are working with White aides.

However, because of the relatively small number of centers in this category it is not possible to discern any pattern to these figures.

Table Q3.4 displays the ethnic/racial mix of center staff members within each region. Those centers which had a predominantly White staff were located almost exclusively in the Northeast and the West. Centers staffed primarily by Blacks were found in all regions but with a large proportion found in the Southeast. Two of the three centers primarily staffed by Hispanics, Native Americans, or Asian were located in the Southwest with the third center found in the Northeast. Centers having some ethnic/racial staff composition balance are scattered in all regions but are located predominantly in the Northeast. It is clear that regional variation in the mix of staff members within centers is a property of this sample of centers. Therefore, the potential for confounding this staff mix with regional factors is present here as it has been with the other sample characteristics which have been distributed by region.

With respect to type of agency operating the center, there appears to be some systematic variation in staff racial/ethnic mix. The racial/ethnic mix of 67 centers distributed by center auspices is presented in Table Q3.5. Centers under the auspice of local Community Action Agencies have great variation in the mix of their staff. Predominantly Black or White staffs are found in 27.7 and 41.7 percent of the CAA centers, respectively, while racially balanced staffs are employed in 25 percent of these centers. Centers operated by public schools generally have staffs that are either predominantly White or balanced. Nonprofit centers are either predominantly Black or balanced. The college sponsored centers in the present sample have all Black staff. These findings need to be put into context in order to be fully understood. The ethnic mix of the staff in the centers of this sample vary by region and by the auspices under which they operate. However, in more than three quarters of the centers, the ethnic mix of the staff closely matches the ethnic population of the children regardless of where the center is located and in most cases, regardless of the auspices of the center (Table Q3.6).

Thus, the finding that children and staff within individual centers tend strongly to have the same ethnic backgrounds, cannot be accounted for by either regional factors or the auspices of the center. Indeed, the findings presented in Table Q3.6 underestimate the extent to which there is a ethnic match between staff and children. Of the 13 centers in this Table in which a match is reported not to be found, 11 centers are actually composed of one mixed group (either children or staff) and one partially mixed group.

Conclusions

There seems little doubt that most Head Start children are attending centers in which almost all of the other children and almost all of the staff are from the same ethnic background. The most likely explanation of this situation is that Head Start centers reflect the character of the neighborhoods which they serve. Head Start has not been any more successful than any other agency in federal, state, or local government, to create mixed environments, and it has been (if the present figures accurately reflect the true state of Head Start centers) somewhat less successful than some other agencies. This is probably because Head Start has made such an effort to reflect local community desires rather than impose standards of ethnic mix. It is unfortunate that there is so little of a mix for children at this age for at least the reason that it is important to determine if the problems of mixing children in public schools could be eased by starting the mix in preschool. However, there are not enough data in the present study to come to grips with this problem. We conclude that Head start centers, regardless of region or auspices, reflect the ethnic composition of the neighborhoods they serve in terms of the children and staff who participate.

TABLE Q3.1

STAFF ETHNICITY

Staff Ethnicity	N	Percent
Predominantly Black (70% or more)	26	38.8%
Predominantly White (70% or more)	20	29.8%
Predoninantly Other (70% or more	3	4.5%
No Predominant Race (less than 70%)	18	26.9%
Total Number of Centers	67	100.0%

TABLE Q3.2

ETHNICITY BY STAFF LEVELS

	STAFF LEVEL		
ETHNICITY	SUPERVISORS	TEACHERS	AIDES
Predominantly Black (70% or more)	48.8% (21)	37.3% (25)	44.8% (30)
Predominantly White (70% or more)	34.9% (15)	34.3% (23)	34.3% (23)
Predominantly Other (70% or more)	0.0% (0)	6.0% (4)	4.5% (3)
No Predominant Race (less than 70%)	16.3% (7)	22.4% (15)	16.4% (11)
Total Number of Centers	43	67	67

TABLE Q3.3

STAFF ETHNICITY BY STAFF LEVELS

	Supervisor Ethnicity				Teacher Ethnicity				Aide Ethnicity			
Staff Ethnicity	Black (≥70%)	White (≥70%)	No Major Race (<70%)	Missing Ethnicity	Black (≥70%)	White (≥70%)	Other (≥70%)	No Major Race (<70%)	Black (≥70%)	White (≥70%)	Other (≥70%)	No Major Race (<70%)
Black (≥70%)	17	1	2	6	23	0	0	3	24	1	0	1
White (≥70%)	0	9	1	10	1	18	0	1	1	18	0	1
Other (≥70%)	0	0	0	3	0	1	2	0	0	0	3	0
No Major Race	4	5	4	5	1	4	2	11	5	4	0	9
Number of Centers	21	15	7	24	25	23	4	15	30	23	3	11

TABLE Q3.4

STAFF ETHNICITY BY REGION

Staff Ethnicity	REGION Northeast	Southeast	Southwest	West	Total
Predominantly Black (70% or more)	3	12	4	7	26
Predominantly White (70% or more)	10	3	0	7	20
Predominantly Other (70% or more)	1	0	2	0	3
No Predominant Race (less than 70%)	9	3	3	3	18
Total Number of Centers	23	18	9	17	67

TABLE Q3.5

STAFF ETHNICITY BY AUSPICES

Staff Ethnicity	AUSPICES Local CAA	Public School	Non-Profit	College or Univ.	Other	Total
Predominantly Black (70% or more)	10	1	5	4	6	26
Predominantly White (70% or more)	15	4	1	0	0	20
Predominantly Other (70% or more)	2	1	0	0	0	3
No Predominant Race (less than 70%)	9	4	4	0	1	18
Total Number of Centers	36	10	10	4	7	67

TABLE Q3.6

MATCH OF STAFF ETHNICITY AND CHILD ETHNICITY IN H. S. CENTER

	Ethnic Composition of Center				
Staff Ethnicity	Predominantly Black (70% or more)	Predominantly White (70% or more)	Predominantly Other (70% or more)	No Predominant Races (Less than 70%)	Center Ethnicity Missing
Predominantly Black (70% or more)	18*	0	0	0	8
Predominantly White (70% or more)	0	12*	0	7	1
Predominantly Other (70% or more)	0	0	2*	1	0
No Predominant Race (Less than 70%)	4	1	0	7*	6
Total Number of Centers	22	13	2	15	15

* Indicates "close" match of staff ethnicity and child ethnicity in center.

TABLE Q3.7

ETHNIC COMPOSITION OF H.S. CENTER CHILDREN

ETHNICITY OF STAFF	BLACK	WHITE	OTHER	MIXED	MISSING	TOTAL
SUPERVISORS						
Black	15*	0	0	1	5	21
White	2	6*	0	6	1	15
Mixed	0	0	0	3*	4	7
Missing	5	7	2	5	5	24
TEACHERS						
Black	16*	0	0	1	8	25
White	0	12*	1	6	4	23
Other	0	0	1*	3	0	4
Mixed	6	1	0	5*	3	15
AIDES						
Black	16*	1	0	1	12	30
White	2	12*	0	8	1	23
Other	0	0	2*	1	0	3
Mixed	4	0	0	5*	2	11
TOTAL STAFF						
Black	18*	0	0	0	8	26
White	0	12*	0	7	1	20
Other	0	0	2*	1	0	3
Mixed	4	1	0	7*	6	18
TOTAL NUMBER OF CENTERS	22	13	2	15	15	67

* Indicates match between ethnic composition of staff and ethnic composition of children attending Head Start Center.

Question 4: Head Start Center Auspices

The Head Start programs sampled in the transition study were sponsored by Community Action Agencies, Nonprofit Agencies, Public Schools, College, Religious organizations, and others. In this project, the relationship of auspices with center programs, parent attitudes and behaviors, and child outcomes are considered.

Are center auspices distributed equally in all regions of the country?

No. Centers sponsored by Community Action Agencies are found in all regions and in all community types (Table Q4.1). Although they are generally in the majority, it is in the Southeastern section of the country where they account for a minority of centers. Public schools sponsor Head Starts in all regions but are found only in the medium and large cities in these regions and not found at all in small towns or rural areas. The remaining sponsors are found in very restricted segments of the country.

Are there major differences in the family background of the participants across different program sponsorships?

There are significant differences in the socio-economic status of parents enrolling their children in Head Start Centers under different auspices. Higher per capita incomes are found for parents with children in centers operated by CAA's and religious or nonprofit groups, while lower per capita incomes are found for parents with children enrolled in centers run by colleges or universities or the public schools. This pattern, however, also reflects differences in socio-economic status associated with different regions of the country. Very few CAA sponsored centers are found in the Southeast and no religious groups from that region emerged in the sample. Conversely all of the university based centers are in the Southeast whereas most of the non-profit agencies are located in regions with generally higher incomes than in the Southeast. It is likely that the auspices of the center in which a child is enrolled is determined by the regional conditions in which the child lives rather than by any choice process of parents or centers.

Are there variations in program activities in centers under different sponsorships?

To a small extent, centers sponsored by Community Action Agencies are equally divided among those which emphasize academic activities, those which emphasize social activities, and those which emphasize dramatic/expressive play. However, among centers sponsored by public schools, half emphasize social activities and the other half have no discernible activity emphasis. There is not enough data to reliably describe the activity emphases in the centers sponsored by other agencies.

Are there differences in staffing patterns across different types of sponsorship?

The racial/ethnic mix of staff in CAA operated centers were very diverse with comparable numbers of these centers having predominantly White staffs, predominantly Black staffs, or staffs with some racial balance. Centers sponsored by public schools had either predominantly White staffs, or racially balanced staffs. Centers under the auspices of colleges or universities or unspecified auspices, all of which were located in the Southeast, were staffed by Blacks.

Are there differences in staff and parent training across different types of auspices?

There is very little variation among center sponsorships with regard to teacher or parent training opportunities. Regardless of the type of sponsorship, both teachers and parents had opportunities to attend inservice teaching sessions by supervisors or consultants. Teachers also had the opportunity to attend classes at local colleges to better their teaching skills.

Are there differences in child outcomes in programs under different sponsorship?

There is no discernible effect on any of the academic or affective outcomes associated with the auspices of the Head Start centers.

Are there differences in parental attitudes toward schools across different types of sponsorships?

Parents with children enrolled in centers operated by colleges or unspecified auspices tend to have a more negative attitude toward school. This pattern probably reflects some regional differences since all centers in this group are found in the Southeast. Generally, the attitudes of parents toward schools do not differ significantly across types of sponsorship.

Are there differences in parent educational aspirations and expectations for their children across different types of sponsorship?

There is no difference in parents' perceptions of their child's ability or performance in school with respect to different types of sponsorship. However, parents with children enrolled in public school operated centers tend to have somewhat lower educational aspirations for their children.

Do teachers' perceptions of Head Start children differ under different types of sponsorship?

No. Although public school teachers' perceptions (summarized in the two scales called "All American" and "Assertiveness") differentiates sharply between children who go to Head Start and those who attended other preschools (or no preschool at all), these perceptions are not at all differentiated by the sponsorship under which the Head Start children attended preschool.

Is parent involvement different in Head Starts under different sponsorships?

Yes. Parents whose children attended either Community Action Agency or public school sponsored centers tend to participate at the Head Start center or talk with their children's teachers more often than parents who attended centers under other kinds of sponsorship.

Technical Discussion

A number of issues have been posed relative to the sponsorship of Head Start center programs. The Head Start programs sampled in the transition study were sponsored by Community Action Agencies (CAA), nonprofit groups, public schools, colleges, religious organizations and others. Several issues will be examined comparing Head Start center programs under different program auspices.

Table Q4.1 displays the distributions of program auspices found in each region and community type. It should be stated at the outset that breakdown of auspices by community type do not match those reported in the initial transition study. Categories of community types used in this analysis were taken directly from the center questionnaire. The four categories used are: (1) Rural or open country, (2) Small town (2,500-25,000), (3) Medium city (25,000-100,000) and (4) Large city (over 100,000). The initial transition study utilized three categories: (1) Rural (less than 10,000), (2) Small town (10,000- 50,000) and (3) Urban (over 50,000). Almost two-thirds (64.6%) of the respondents to the Head Start center survey indicated their center was under the sponsorship of a Community Action Agency. The centers under CAA auspices were found in all regions and community types. Centers under the auspices of public schools were found in all regions but concentrated in medium or large cities. The majority of centers operated by nonprofit groups were in the West. College sponsored centers were located only in small town communities in the Southeast, while religious organizations operated centers in medium sized cities in the Northeast. Those centers classified in the "other" category of sponsorship were found only in the Southeast, primarily in smaller or medium sized cities. It appears that only two categories of auspices, CAA and public school sponsorship have reasonable distributions across the four regional classifications.

Center characteristics including staffing patterns and staff and parent training were examined with respect to auspices. It should be recalled that the rural/ethnic mix of staff in CAA operated centers was very diverse with a comparable number of centers having predominantly White staffs, predominantly Black staffs, or staffs with some racial balance. Centers under the auspices of public schools tended to have either predominantly White staffs or racially balanced staffs, while the staffs of non profit group centers were predominantly Black or racially balanced. Centers under the auspices of colleges and universities or other types of auspices, all of which were located in the Southeast, were generally staffed by Blacks.

To provide a clearer picture of personnel within each type of sponsorship, the type of teacher and parent training opportunities offered in the centers was related to center auspices. Three categories of auspices were used in this analysis: (1) public schools, (2) local CAA (3) all other types of auspices. There is very little variation among center sponsorships with regard to teacher or parent training opportunities. Table Q4.2 indicates that regardless of the type of sponsorship, both teachers and parents had the opportunity to receive inservice training by supervisors or consultants, or to attend lectures by specialists. Teachers also had the opportunity to attend classes offered by local colleges to better their teaching skills. It should be noted that these results were produced from answers received from qustionnaires submitted to center directors and reflect only the form of the training provided and not the content.

In addition to staffing patterns and training opportunities, program activities were examined with respect to center auspices. As reported earlier, the most striking finding was that all three program activity categories were found with equal frequency among the CAA centers. However, public school operated centers showed some slight variation from this pattern. Half of the public school centers strongly emphasized social activities, while half of these centers did not emphasize this kind of a program. Once again, these variations seem to be determined by regional factors rather than anything intrinsic to the centers.

Additional issues pertaining to auspices necessitated the aggregation of parental data to center level. In order to insure some stability on the measures only centers having at least five valid responses to the variable in question were included in the analyses. Because of the great reduction in the sample size, the reader should be alerted to remain cautious when making generalizations regarding these data. Measures of family background, parental attitudes and expectations, as well as indices of parent involement were aggregated to center level to provide additional insight into differences across program sponsorship.

Table Q4.3 presents means by type of auspices for two family background measures, per capita income and mothers' education. From this aggregation, it appears that centers under the auspices of local community action agencies serve parents from slightly higher socio-economic statuses. Parental attitudes toward school and their perceptions of their child's aspirations and expectations are found in Tables Q4.4 and Q4.5, respectively. It appears that there is very little difference in attitudes, aspirations and expectations when they are distributed within auspices. Those parents with children enrolled in Head Start centers not operated by CAA's or public schools tend to have a more negative attitude toward school, but the very small number of such centers precludes any real confidence in such a finding.

Parent involvement at the Head Start center is considerably higher for centers run by public schools and by local CAA's as evidenced in Table Q4.6. Parents in these two types of centers tend to help out almost once a month while parent participation at other centers is less than 4 times a year. Parents with children enrolled in local CAA operated centers tend to visit the teacher more frequently.

Conclusions

The auspices under which a Head Start center is operated is an issue of major significance to all levels of policy makers. It makes a great deal of sense to try to determine the differential characteristics of centers under different auspices and to attempt an estimate of the differential effects on parents and children of these differences in operational support. Based on the present findings, the auspices of the center does not appear in itself, to be an important causal factor in any of the processes surrounding Head Start. It is more reasonable to consider the auspices which emerge locally to be the consequence of local conditions within which a Head Start program is established. These are probably the same local conditions which contribute to parent attitudes and behaviors along with child performance. Although there are a few differences in the events which take place in centers under different auspices and a few differences in the kinds of parents who send their children to different kinds of centers, the most likely explanation of these phenomena has to do with center locale and local conditions of education and politics which contribute to the emergence of one or another kind of delegate agency.

The potential policy implications of this explanation are important enough to warrent further consideration. It should be noted that although the findings indicate that the events which take place for children in centers do not reflect the kind of auspices under which the center is operating, there are two reasons why this is a misleading interpretation. The first reason is that the auspices of the center are confounded with region in this sample. Should there truly be differences between centers operated, for example, by CAAs compared to centers operated by public schools, such differences could not be observed in the present study.

For example, CAA, nonprofit, and public school delegate agencies are found in almost every region of the country, but in quite different proportions. The CAA agencies are found disproportionately in the Northeast, Southwest, and West and are underrepresented in the Southeast (which is the least affluent section of the country). The nonprofit groups are disproportionately found in the West and are not found in other sections of the country to any appreciable degree. Public schools as delegate agencies are found about equally distributed in all sections of the country except in the Northeast where they are not found in proportion to their numbers. Obviously there is some tendency for some agencies to be easier to establish in some regions than in others, but each kind of agency is found in some numbers in almost all regions. The reasons for these distributions undoubtedly have to do with the local political situation which is in part unique to each site and, in part a reflection of unique regional factors. What is important, however, is that the activities in the centers, the rates of parental participation in the center, the SES of families served, cut across the kinds of agencies in each region and reflect local and regional dynamics rather than auspices, per se. Wherever there seems to be a systematic relationship between the auspices of the center and other center or parent characteristics, those relationships exist because the auspices vary across the regions. For example, when both CAA and public school agencies are located in the same region they have Head Start centers with very similar programs, serve the same kinds of parents who have the same kind of attitudes and incomes, and provide similar kinds of training to the staff. When the region shifts the centers of both kinds of agencies shift their characteristics accordingly.

The second reason why the findings are misleading is that the sample itself is of such a nature as to preclude generalization to any other groups of centers. The original sample of centers was selected to be representative of centers in the nation and, with attrition, they can be considered to be close to representative. But the kindergartens which were selected as representative of those serving Head Start children are not at all representative of the population. They are simply some of the kindergartens located in the same general neighborhoods as the centers and are, at best, serving the most stable Head Start families. The Head Start children selected for the study were those found in these kindergarten classrooms and whose Head Start centers could be identified. In almost 50 percent of the centers. fewer than five of their graduates could be found in the public schools or found with enough data to analyze. These centers were rejected for analysis of child and parent data. Thus, the centers which were included in the analysis of the effects of auspices were reduced by eliminating a group of centers which have had a highly mobile group of families to serve. Further, many centers were included in the analysis when as few as 5, 6, or 7 of their graduates could be found. It is known that the mean enrollment of these centers is approximately 50 children (with an average of 3 classes of about 16 children per class). Thus, a number of centers were represented by 10 to 14 percent of their graduates. This can be an acceptable number for a small sample if that sample was selected on some basis. Unfortunately, these children were not selected on a sampling basis. It was earlier decided in this study that centers which were to be represented by five children would be acceptable for the analysis, but the instability of findings based on such inclusion standards must be kept in mind.

The critical issue is the loss of centers from the analysis of parent and child data from the several categories of auspices. We are particularly interested in the CAA and public school categories. The original sample of centers (130 were sampled from the national list of centers) was sent questionnaires about the resources, facilities, staff, activities, and children. Of these, 99 finally provided completed forms, of which 64 were CAA centers and 10 were public school centers. The analysis of center data is generally based on this figure. However, when the kindergartens serving these centers were found and the Head Start children in these kindergartens identified and tested, and the inclusion criterion of 5 or more children per center was applied, the number of available centers dropped drastically. There was a loss of 60 to 70 percent of the public school centers (from 10 to 3 or 4 centers depending upon the information involved) and a loss of 60 to 80 percent of the CAA centers (from 64 to 12-21 centers depending upon the information involved). Thus, the finding that parents whose children went to a public school sponsored Head Start had a very slightly different perception of kindergarten teachers than parents who sent their children to CAA sponsored Head Starts, is based on 4 public school centers against 12 CAA centers and these two groups of centers were generally found in different regions of the country. The same situation exists for all comparisons of centers grouped by auspices when the data compared are parent or children data aggregated to center level. It should be noted that many analyses of parent and children data were accomplished in this study at the individual level which then involved hundreds of cases. However, this kind of analysis could not logically support examination of center properties.

We conclude that the finding of no real effects of auspices or differences in auspices of centers of Head Start is only relevant to the group of centers included in this study and cannot be generalized to the policy level. It would not be appropriate to draw any policy implications from these findings. It is appropriate, however, to reiterate the very powerful finding that regional variables carry most of the important sources of variability in the contrast of Head Start children to other children. Local site and regional factors contain most of the reasons why the present findings have been generated and until more is known about these local factors, it is not likely that there will be any meaningful advances in knowledge of the extent to which and how

Head Start has an influence in the lives of children and their families.

TABLE Q4.1

AUSPICES BY REGION AND BY COMMUNITY TYPE

	REGION										COMMUNITY TYPE							
	Total		Northeast		Southeast		Southwest		West		Rural		Small Town		Medium City		Large City	
Auspices	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Local CAA	64	64.6	28	80.0	6	27.3	10	83.3	20	66.7	15	23.4	24	37.5	16	25.0	5	7.8
Non Profit	11	11.1	3	8.6	1	4.5	0	0.0	7	23.3	0	0.0	2	18.2	5	45.5	4	36.4
Public School	10	10.1	2	5.7	3	13.6	2	16.7	3	10.0	0	0.0	1	10.0	5	50.0	4	40.0
Non-specified	8	8.1	0	0.0	8	36.4	0	0.0	0	0.0	0	0.0	5	62.5	3	37.5	0	0.0
College	4	4.0	0	0.0	4	18.2	0	0.0	0	0.0	0	0.0	4	100.0	0	0.0	0	0.0
Religious Org.	2	2.0	2	5.7	0	0.0	0	0.0	0	0.0	0	0.0	0	0.0	2	100.0	0	0.0
Totals	99		35		22		12		30		15		36		31		13	

NOTE: 4 local CAA missing Community Type.

TABLE Q4.2

AUSPICES BY TEACHER AND PARENT TRAINING

	TEACHER TRAINING[1]						PARENT TRAINING[2]					
Auspices	Inservice Supervisor	Inservice Consultant	Univ. 8 Weeks	Univ. 1 Week	Lectures Specialists	Classes At School	Inservice Supervisor	Inservice Consultant	Univ. 8 Weeks	Univ. 1 Week	Lectures Specialists	Classes At School
Local CAA	63	60	10	14	55	49	53	48	4	5	50	10
Public School	10	9	1	2	6	10	8	8	0	0	7	3
Other Auspices	24	21	1	8	19	19	20	19	0	4	17	7
	97	90	12	24	80	78	81	75	4	9	74	20

[1] Based on n = 98 Local CAA (64) Public School (16) Other (24)

[2] Based on n = 91 Local CAA (60) Public School (9) Other (22)

TABLE Q4.3

FAMILY BACKGROUND BY AUSPICES

	PER CAPITA INCOME		MOTHER'S EDUCATION	
	Mean	N	Mean	N
Public Schools	$1,259	(4)	10.09	(4)
Local CAA	$1,506	(21)	11.23	(29)
Other Auspices	$1,356	(6)	10.69	(7)
Total	$1,445	(31)	11.02	(40)

TABLE Q4.4

PARENTAL ATTITUDES BY AUSPICES

	School Negativism		Value of Education		Education As Upward Mobility		Social Traditionalism For Children		Positive Perception Of Teacher	
	Mean	N	Mean	N	Mean	N	Mean	N	Mean	N
Public Schools	-0.02	(3)	-0.13	(3)	0.30	(3)	-0.03	(3)	0.27	(3)
Local CAA	0.03	(12)	-0.02	(12)	0.03	(12)	-0.08	(12)	0.09	(12)
Other Auspices	0.44	(2)	0.18	(2)	0.28	(2)	0.29	(2)	0.13	(2)
	0.07	(17)	-0.01	(17)	0.11	(17)	-0.03	(17)	0.13	(17)

TABLE Q4.5

PARENTAL EXPECTATIONS BY AUSPICES

	Ability[1]		Performance[2]		Aspiration[3]	
	Mean	N	Mean	N	Mean	N
Public Schools	2.18	(4)	2.84	(4)	2.29	(4)
Local CAA	2.26	(28)	2.81	(29)	2.73	(26)
Other Auspices	2.17	(6)	3.03	(6)	2.87	(6)
Total	2.24	(38)	2.85	(39)	2.70	(36)

[1] Ability (1) Below Ave. (2) Average (3) Above Ave.

[2] Performance (1) Poor (2) Average (3) Good (4) Excellent

[3] Aspiration (1) Finish 8th grade (2) H. S. Diploma (3) 2 yr. College (4) 4 yr. College

TABLE Q4.6

PARENTAL INVOLVEMENT BY AUSPICES

	Help At Head Start[1]		Talk With Teacher		Involvement With Parents[2]	
	Mean	N	Mean	N	Mean	N
Public Schools	2.52	(4)	1.52	(6)	2.16	(4)
Local CAA	2.75	(29)	2.26	(34)	2.24	(27)
Other Auspices	1.91	(6)	1.76	(7)	2.34	(6)
Total	2.59	(39)	2.09	(47)	2.25	(37)

[1] Help at H.S. (1) Less than 4 times a year (2) 4 times a year (3) once a month (4) twice a month (5) once a week

[2] Involvement with parents (1) 4 times or less (2) once every 1 or 2 months (3) twice a month (4) once a week

Question 5: Parent Involvement in Head Start

One of the major components of all Head Start programs is parent involvement. This project focused on four measures of parent involvement: (1) parent involvement at the Head Start Center, (2) parent involvement with the child's teacher, (3) parent involvement with other parents, and (4) parent involvement with the child in the home. These measures have been examined in relation to several characteristics of Head Start families and Head Start Centers.

Do the patterns of parent involvement vary according to family background?

Ethnicity and socio-economic status are related to certain indices of parent involvement. White parents tend to participate in Head Start activities and talk with their child's teacher more often than Black parents. Black parents, especially those of first graders in the Southeast, tend to help their children with school work more frequenctly. Parents with higher socio-economic status, as evidenced by per capita income and mother's education, tend to help at the Head Start Center and talk with their child's teacher more often than those of lower socio-economic status. Family configuration, including the size of the family and the number of adults in the home, as well as the employment status of parents fail to show a relationship with any of the indices of parent involvement.

What is the relationship between the type and frequency of parent involvement in Head Start and parent's attitude toward school?

Parents with a negative school attitude who believe they could do little to improve the school tend to be less involved in Head Start. However, children of parents with a negative school attitude tend to ask for more help from parents in the home.

Do the patterns of parent involvement vary according to region or community type?

Parents in the Southeast tend to be less involved in Head Start activities and interact less with their child's teacher than those in other regions. A higher percentage of parents living in the West help out at the Head Start Center at least once a week than elsewhere. However, the number of times parents were asked by their children to help with school work at home was considerably higher for parents in the Southeast.

With respect to community type, there is little variation in rates of parent involvement for any of the indices.

Does the type and frequency of parent involvement vary under different program sponsorship?

Parents of children who attended Head Start Centers operated by public school or local Community Action Agencies participated more in Head Start activities, talked more frequently with the child's teacher, and were asked for help on homework less frequently than parents of children who attended Head Start Centers operated under other auspices.

Does the type and/or frequency of parent involvement in Head Start and in public school differ according to the center's racial/ethnic mix?

Parents of children enrolled in Head Start Centers with a predominantly White enrollment tend to help at the Head Start Centers more frequently, communicate with their child's teacher more often, and are asked to help their children with school work less frequently than parents of children who attended predominantly Black Head Start Centers or centers with a racial/ ethnic mix.

Is the type and/or duration of parent involvement related to child outcome measures? If so, how and for which outcomes?

There is no systematic relationship between type and/or duration of parent involvement and child outcome measures.

Is the type and/or duration of parent involvement related to the learning environment and learning materials found in the Head Start children's homes? If so, does the relationship change with different family backgrounds?

There is a strong positive relationship between the number of educational materials and books found in the home and the parent's involvement in Head Start activities and with the child's teacher. These relationships hold true regardless of the family's ethnic background or its socio-economic status.

Are the home learning materials related to the child outcome measures? Does this vary with family background?

There is a relatively strong positive relationship between the number of educational materials found in the home and several child outcome measures. Although the strength of these relationships varies with respect to region, the relationship between educational materials in the home and two outcomes, copy marks and oral math, remain positively related across all regions. These relationships remain significant when socio-economic status is held constant.

Technical Discussion

In an attempt to determine factors associated with variation in rate of parent involvement, four indices of involvement of Head Start parents (How frequently parents helped at the Head Start center; How frequently parents interacted with other parents of Head Start children; The number of times a parent talked with the child's teacher; and The number of times the child asked the parents for help with school work) were examined relative to a number of variables. These variables included family background characteristics (ethnicity, family size, number of adults, employment status of parents), socio-economic status (per capita income, mother's education), parental attitudes (attitudes toward school, locus of control, child's expectations), home environment (learning materials), demographic variables (region, city size), and center characteristics (auspices, center ethnicity, center activities). An indepth look at the relationship of these variables with respect to the rates of parent involvement follows.

A fundamental question that needs to be addressed concerns the variability of parent involvement according to family background characteristics. When the ethnicity of the parents was examined (Tables Q5.1 to Q5.4), it was found that White parents tend to participate in Head Start activities more often than Black parents. Non-participation rates of Blacks and Whites were 38.8 percent and 27.5 percent respectively, while 26.1 percent of the Whites were involved at the center at least once a week compared to only 15.3 percent for Black parents. There was little difference in parent involvement with other parents with respect to ethnicity of the parent. The percentage of Black parents who did not talk with their child's teacher (25.7%) was considerbly higher than that found for White parents (9.5%). With respect to the number of times a child asked for help on school work, the percentage of Blacks seeking help every day (57.7%) was more than twice as high as the percentage of Whites seeking help every day (27.2%). It appears that ethnicity is definitely associated with rates of parental involvement.

Family configuration, combining family size and the number of adults in the home, was examined as a second family background factor which potentially could relate to the rate of parent involvement. It was expected that these family structure variables would offer some viable explanation of enhanced or restricted ability of parents to become involved in Head Start activities. It was anticipated that parents with a number of small children and no other adults in the family structure would find it awkward to leave a family and, hence, would tend to have lower rates of involvement in various kinds of activities than those parents for whom attendance at meetings would present little stress on family or personal resources. However, this was not the case. These family variables were not strongly related to any of the four indices of parent involvement used in this study.

A final family background variable examined in relation to parent involvement was the employment status of the parents. It was surmised that families with parents who work might either have jobs that conflict with Head Start activities or be too tired to attend such functions after work. Again, this phenomena did not occur. There was little difference in rates of parent involvement for any of the indices with respect to employment status of the parents. In fact, if anything, the reverse trend held, with families with both parents working helping out at the center a little more frequently than those families with no parents working. Thus, although intuitively it seems logical that certain family background variables should be related to rates of parent involvement, the data do not support this premise.

Two measures of socio-economic status, namely per capita income and mother's education, were examined as possible factors associated with parent involvement (Table Q5.5). Unlike the family background variables, these two indicators of socio-economic status seem to have some relationship to certain indices of parent involvement. Three measures of parent involvement were positively related to per capita income. The correlations between per capita income and the frequency parents helped out at the Head Start center, met with other Head Start parents, and talked with their child's teacher were significant (r= 0.10, 0.07, and 0.13, respectively).

With regard to mother's education, two measures of parent involvement had significant correlations. The frequency of parental help at the Head Start center and the number of times parents talked with their child's teacher were positively related to mother's education (r=0.12 and 0.15, respectively). Those with less than a high school diploma tended to help out at the Head Start center less frequently than those with a high school diploma or above. The higher the mother's education the greater the number of talks with the teacher. However, there was little difference in the rates of parent involvement of the remaining two indices of parent involvement with respect to mother's education.

Certainly a primary factor that must be examined in relationship to parent involvement is the parents' attitudes toward school. The transition study assessed parents' current attitudes about schools and education with a set of factors from the Hess Educational Attitudes Scale (Table Q5.6).

One of the Hess Attitude factors, Factor I - School negativism, demonstrated significant association with the set of parent involvement indices. The item loadings on this factor suggest a measure of powerlessness and alienation with respect to the schools. It comes as no surprise then, to find a significant negative relationship between this factor and three parent involvement measures. Correlations between Factor I and how often the parents helped at the Head Start Center, how often the parents interacted with other parents, and how often the parents talked with the teacher were significant (r= -0.16, -0.10 and -0.20, respectively). In other words, those parents who felt they could do very little to improve the school tended to be less involved, while those parents who believed their efforts would be supported by the teachers and principals were involved to a much greater extent. However, children of parents with a negative school attitude generally asked for more help from parents in the home. It appears that parents who feel alienated and powerless when it comes to school activities find some consolation in helping their children at home.

In a similar vein, two measures of locus of control were examined in relation to parent involvement. The first measure constituted a general locus of control scale. The only parent involvement measure that was associated with the general measure of locus of control was the number of times a child asked the parent for help. Over half of those parents with an external locus of control found their child asking for help daily while forty percent of the parents with an internal locus of control had children asking for help with school work every day. A second measure of locus of control (three items composed of the Hess Educational Attitudes Scale) examined the parent's perceptions of locus of control with respect to the school. Because these three items loaded heavily in Factor I of the principal component analysis, the relationships between this variable and the parent involvement indices reflect significant relationships similar to those found for Factor I. Parents with a more external locus of control with respect to school activities tend to be less involved at school and somewhat more involved at home.

In addition to parental attitudes, parental expectations were examined in relation to parent involvement (Table Q5.7)

The transition study examined the parents' perceptions of their child's ability and performance compared to other children, as well as the parents' perceived educational aspirations for their children. Parent involvement in the Head Start center was positively related to the parent's perceptions of their child's ability and performance (r=0.0656 and r=0.0594, p<.05). Parents perceiving their child's ability and performance as below the other children tend to be less involved at the Head Start center. For those parents perceiving their child's ability as below the other children, on an average with the other children, and above the average child, the non-participation rate at Head Start Centers were 44.8%, 36.8%, and 25.4%, respectively. However, when those parents with low perceptions of their child's ability did participate a majority of them participated once a week. With respect to parent involvement with other parents, a significant positive correlation resulted with the parent's perception of their child's performance in school. When the number of times a parent talked with the teacher was considered, all three measures of parental expectations were positively related to this index of parent involvement. The higher the parent's perceptions and expectations of their child the more they talked with the child's teacher. Finally, with respect to the number of times a child asked the parent for help on school work, as expected, the children with lower ability generally asked for help every day while those with higher abilities did not ask for help as frequently.

As a measure of home environment, the number of educational materials and books found in the home was examined in relation to the four parent involvement indices. Generally, a strong positive relationship exists between the number of education materials found in the home and the parents involvement in Head Start activities (Table Q5.8). This positive relationship holds true when controlling for family background measures such as per capita income and mother's education. Apparently, those parents actively participating in Head Start functions are also providing educational materials at home in an attempt to foster an environment in which their children can develop to their fullest potential.

In addition to specific parental characteristics, parental attitudes and home environment measures, the proportion of parent involvement in the four indices were broken down by region and community type. In Tables Q5.9 to Q5.12 there appears to be some variation by region. Parents in the Southeast tend to have a higher percentage of non-participants at Head Start activities, while parents in the West have a higher percentage of parents helping out at the Head Start Center at least once a week. A similar trend is found with parent involvement with other parents. With respect to the number of times a parent talks with the teacher, parents in the Southeast are much less involved. The percentage of parents who did not talk to the teacher in the Southeast was 30.3 percent compared to 18.0 percent in the Southwest, 10.1 percent in the Northeast and 8.4 percent in the West. While it appears that many of the parents in the Southeast are not involved in activities held at school, the number of times these parents are asked to help their children on school work at home is considerably higher (60% to approximately 35% for the rest of the regions). One factor that might explain this phenomena is the greater number of children entering directly into first grade in the Southeast as opposed to entering into kindergarten. It is quite plausible that first graders may have more outside assignments to do at home than do kindergarteners. Similarly, first grade teachers may schedule only one or two meetings with parents while kindergarten teachers may make a conserted effort to meet with parents more frequently. However, this grade differential does not explain the variation across regions helping out at the Head Start Center and interacting with other parents. Apparently there is some regional affect influencing parent participation.

With respect to community type, that is, the size of community served by the Head Start Center, there was very little variation in rates of involvement for any of the parental involvement indices. A larger percentage of parents from medium or large cities did not become involved with other parents of Head Start children. However, generally community type had little effect on the involvement rates of parents.

Certain center characteristics (auspices, ethnicity of the students enrolled, and center activities) were examined in relationship to rates of parent involvement. Parent involvement indices as they relate to center auspices are found in Tables Q5.13 to Q5.16. Parents with children enrolled in centers operated by someone other than public schools or local community action agencies (CAA) tend to be less involved in Head Start activities. Only about one-fourth of the parents with children attending these two types of centers did not help at the center while over forty percent of the parents with children enrolled in centers under other auspices failed to participate. A slightly higher percentage of parents from public school centers participated in Head Start activities at least once a week compared to those from local CAA operated centers. Relatively, little difference existed between centers under different auspices relative to opportunities for parents to interact with parents of other Head Start children. When the number of times a parent talked with the teacher was considered, parents with children in centers run by organizations other than public school systems or local CAAs had considerably less contact with the teacher. Almost sixty percent of those parents talked with the teacher at most one time compared to 43.6 percent for public school centers and 35.8 percent for local CAA centers. Almost two-thirds (64.3%) of the parents with children in those other centers indicated their children asked them for help every day compared to 34.1 percent and 28.1 percent for parents with children in local CAA or public school operated programs respectively.

Center ethnicity was also examined in relationship to rates of parent involvement (Tables Q5.17 to Q5.20). When centers with predominantly White or Black enrollments (70% or more of the particular race) and centers with some racial balance were compared with respect to parent involvement indices, there appeared to be some slight differences. The percentage of parents of children attending predominantly Black centers that did not help at the centers was considerably higher than similar rates of non-involvement for parents of other ethnic breakdowns (38.3% for predominantly Black centers, 25.9% for predominantly White centers, and 29.8% for other centers). In addition parents of children enrolled in predominantly White centers tended to help at Head Start Centers more frequently than did parents with children in other centers. Almost half (48.2%) of the parents from predominantly White centers helped at least twice a month compared to 34.6 percent and 28.8 percent of the parents from racially balanced or predominantly Black centers, respectively.

In addition, the percentage of parents from predominantly White centers who did not communicate with their child's teacher was considerably lower than the comparable groups from predominantly Black centers and racially balanced centers (5.5% compared to 26.9% and 19.4%, respectively). However, examination of the number of times children seek help on school work in the home revealed that sixty percent of the parents from predominantly Black centers have children who seek help on school work every day compared to only one-quarter and one-third of the parents from predominantly White centers and other centers, respectively. This phenomena, however, may be attributed to the large number of predominantly Black centers found in the Southeast where the children tend to go into first grade directly after Head Start instead of enrolling in kindergarten. Therefore, one must be a little apprehensive about jumping to conclusions relative to ethnic composition of the Head Start centers in relation to parental involvement.

Finally, center activities were related to parent involvement (Table Q5.21). Three factors emerged from a factor analytic procedure (principal components with a varimax rotation). These three factors: 1) academic knowledge and skills, 2) social knowledge and skills, and 3) dramatic/expressive play reflect the pattern of activity offered at the center.

Examination of the four parent involvement indices indicated that two of them bear no relationship to the activities offered at the centers. However, the relationship between the academic activity factor and two measures of parent involvement, namely "How often did you help at the Head Start Center?" and "How often did you talk to the teacher?" yielded significant negative results ($r=-0.1179$, $p<.05$ and $r=-0.1050$, $p<.05$). It is reasonable to conclude that as the emphasis on academic knowledge and skill activity increased in the centers, the rate of involvement in the Head Start Centers and with the children's teachers decreased.

The interpretation of this finding is somewhat of an enigma. Centers which emphasize the academic activities tended to be predominantly Black in enrollment and staffing. It may be that the low rate of parent involvement is a function of the behavior pattern characteristic of this cultural group. It is also possible that centers which emphasize academic activities tend to resent participation of parents. It is possible that these activities necessitate professionally trained staff and has generated a barrier between center and parents that would be difficult to overcome.

Conclusions

Head Start provides an impressive opportunity for parents to become involved in the education of their children and parents seem to avail themselves of that opportunity. Parents with higher levels of educational accomplishment (high school graduates and those with some post secondary education) participate in the process to a greater extent than parents with less of an educational background. Those with a tendency to have educational and expressive play materials in the home are also those who show higher rates of involvement in Head Start. To some extent, there is a tendency for families with higher per capita income to have greater involvement. Black parents tend to be more heavily involved in working with their children at home on school work, whereas White parents show a greater rate of visits to the centers.

This configuration of findings, at least with respect to the present sample, suggests that there might be some specific groups of parents who are underrepresented as participators in the Head Start programs. These data suggest that Black families are not involved at the Head Start center as much as there is opportunity, and that parents from lower SES levels are also not utilizing the opportunities for involvement. The reasons for this are not clear. Working parents, who might be expected to have less time or energy for involvement, are not uniquely uninvolved. Parents with several children, who might also be expected to have limited resources for involvement, show as much contact with the centers as parents with few children. The number of adults and older children in the family, who might be expected to serve as baby sitters when center visits take place, is not related to the amount of involvement. Thus, it does not seem likely that the physical and economic barriers to involvement are particularly inhibiting in this sample. The barriers are more likely to be psychological and therefore in need of considerably more study before being overcome.

However the problem of increasing parental involvement is solved, the relationship between such involvement and child growth is complex. It should be noted that there is no relationship between involvement and any of the measures used in the present study to estimate child growth. It is most important to note that there is no relationship between the involvement measures and the one outcome measure that indicates unique gains for Head Start children, namely a measure of assertive behavior. Head Start children tend to receive significantly higher scores on this measure than other children, but variations in the size of the assertiveness score are unrelated to the amount or kind of parental involvement in the center or with the child in the home.

There are two possible explanations for this finding. The first is that parental involvement is not on the same psychological dimension as the growth of assertive behavior. This does not seem likely since there are several obvious conceptual links between these two events. However, there is no extant evidence to reject such a notion yet.

The second possible explanation is that the measure of involvement, which includes counts of contact times, is much too gross an estimate of the underlying psychological significance of parental interest as represented to the child. Thus, one visit a year may communicate the same kind of information to the child as weekly visits. It is entirely possible that a parent who has never visited the center can communicate a sense of confidence in the worth of the center and of Head Start to the child which may in fact be that which contributes to the growth of assertive and self confident behavior on the part of the child. It is possible that a low income, undereducated parent who senses a social barrier to visiting the center may nevertheless feel a strong sense of personal identity with the center. Such a parent may also feel a good deal of pride in the success of the centers as an alternative to the more threatening institutions of society. This is precisely the sense of identity and pride which Head Start originally intended to implant in those who felt powerless and lost and this may be implanted without high rates of physical contact with the centers.

There is very little evidence to support or reject this notion. The measure of internal/external sense of control, which should be a source of insight in this topic, shows too little variability to be of use here. No more than ten percent of all parents in the sample showed any tendency toward external locus of control. Although there was some slight relationship between externality and income, little inference can be made from such small numbers.

We are left with a few questions of significance in respect to parent involvement and very few answers. The barriers to involvement appear to be more of a psychological nature than a lack of parent time, energy, or familial resources for visiting the center. It is not clear how involvement influences the child since there is no obvious relationship between involvement and the one measure of child growth which should show such a relationship. Finally, it is not clear that the measures of physical contact with the center used in the present study tap the true feelings of personal and educational value which Head Start is trying to stimulate in parents. These are questions of major significance which cannot be examined in the present study and must be examined in detail before the true impact of Head Start can be assessed.

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TABLE Q5.1

PARENT INVOLVEMENT AT HEAD START CENTER BY ETHNICITY

	Ethnicity of Parent			
	Black		White	
How often did you help at the Head Start Center?	N	%	N	%
Did not help	147	38.8	80	27.5
Less than 4 times a year	37	9.8	18	6.2
4 times a year	40	10.6	25	8.6
Once a month	42	11.1	37	12.7
Twice a month	55	14.5	55	18.9
Once a week	58	15.3	76	26.1
TOTAL	379	100.0	291	100.0

TABLE Q5.2

HEAD START PARENT INTERACTION WITH OTHER PARENTS BY ETHNICITY

	Ethnicity of Parent			
	Black		White	
How often did you meet with other Head Start Parents?	N	%	N	%
Did not meet	34	9.4	7	2.5
4 times a year or less	39	10.8	34	12.1
Once every 1 or 2 months	177	48.9	128	45.4
Twice a month	101	27.9	99	35.1
Once a week	11	3.0	14	5.0
TOTAL	362	100.0	282	100.0

TABLE Q5.3

HEAD START PARENT INTERACTION WITH TEACHER BY ETHNICITY

Number of times talked with teacher	Ethnicity of Parent			
	Black		White	
	N	%	N	%
Did not talk	100	25.7	28	9.5
1	107	27.5	74	25.0
2	71	18.3	85	28.7
3	40	10.3	43	14.5
4	27	6.9	33	11.1
5 or more times	44	11.3	33	11.1
TOTAL	389	100.0	296	100.0

TABLE Q5.4

HEAD START PARENT INTERACTION WITH CHILD BY ETHNICITY

How often does child ask parent for help	Ethnicity of Parent			
	Black		White	
	N	%	N	%
Once a month	37	10.0	57	21.0
2 or 3 times a month	13	3.5	18	6.6
Once a week	45	12.2	51	18.8
Several times a week	61	16.5	72	26.5
Every day	213	57.7	74	27.2
TOTAL	369	100.0	272	100.0

TABLE Q5.5

CORRELATIONS OF PARENT INVOLVEMENT INDICES WITH SES INDICES

Parent Involvement Indices	SES Indices	
	Per Capita Income (N)	Mothers Education (N)
How often did you help at the Head Start Center?	0.1024**(699)	0.1189**(777)
How often did you meet with other Head Start Parents?	0.0706*(673)	0.0518 (745)
Number of times talked with teacher.	0.1259**(715)	0.1502**(792)
How often does child ask parents for help?	-0.0483 (667)	-0.0185 (738)

$* p \leq .05$

$** p \leq .01$

TABLE Q5.6

CORRELATION OF PARENT INVOLVEMENT INDICES WITH PARENT ATTITUDES

		HESS ATTITUDE FACTORS				
Parent Involvement	N	School Negativism	Value of Education	Education as Upward Mobility	Social Tradition-alism	Positive Perception of Teacher
How often parent helps at Head Start Center.	446	-0.1600**	0.0296	-0.0081	0.0047	0.0109
How often parents interact with other parents.	476	-0.1044**	-0.0108	-0.0459	-0.0210	-0.0221
Number of times parent talks with teacher.	504	-0.1985**	0.0328	-0.0183	-0.0395	-0.0116
Number of times child asks parents for help.	472	0.1489**	0.1275**	0.0300	0.0695	-0.0386

** $p \leq .01$

TABLE Q5.7

CORRELATIONS OF PARENT INVOLVEMENT INDICES WITH PARENT EXPECTATIONS

		PARENT EXPECTATIONS	
Parent Involvement Inidces	Child's Ability Compared to Others	How well will the Child Do in School?	How far with the Child go in School
How often do you help at the Head Start Center?	0.0656* (790)	0.05974* (796)	0.0295 (743)
How often do you meet with other Head Start parents?	0.0271 (761)	0.0599* (761	0.0345 (716)
Number of times talked with teacher.	0.0940**(807)	0.0883** (812)	0.0763* (756)
How often does child ask parents for help?	-0.0958**(753)	0.0860** (757)	0.0998**(711)

*$p<.05$
**$p<.01$

TABLE Q5.8

CORRELATIONS AND PARTIAL CORRELATIONS OF PARENT INVOLVEMENT INDICES WITH HOME STIMULATION INDEX

Parent Involvement Indices	Home Stimulation Index Zero Order Correlations	 Partial Correlations[1]
How often do you help at the Head Start Center?	0.2710** (779)	0.2179** (643)
How often did you meet with other Head Start Parents?	0.1772** (747)	0.1506** (623)
Number of Times Talked with Teacher.	0.3070** (794)	0.2528** (657)
How often does child ask parents for help?	- 0.0024 (744)	0.0139 (615)

[1] Controlling for per capita income and mother's education.

** $p<.01$

TABLE Q5.9

PARENT INVOLVEMENT AT HEAD START CENTER BY REGION

	REGION							
	Northeast		Southeast		Southwest		West	
How Often Did You Help at the Head Start Center?	N	%	N	%	N	%	N	%
Did not help	72	30.9	115	44.2	38	26.2	43	25.6
Less than 4 times a yr.	19	8.2	21	8.1	14	9.7	13	7.7
4 times a year	20	8.6	16	6.2	27	18.6	17	10.1
Once a month	31	13.3	28	10.8	22	15.2	19	11.3
Twice a month	49	21.0	38	14.6	14	9.7	29	17.3
Once a week	42	18.0	42	16.2	30	20.7	47	28.0
Total	233	100.0	260	100.0	145	100.0	168	100.0

TABLE Q5.10

HEADSTART PARENT INVOLVEMENT WITH OTHER PERSONS BY REGION

	REGION							
	Northeast		Southeast		Southwest		West	
How Often Did You Meet With Other Head Start Parents	N	%	N	%	%	%	N	%
Did not meet	13	5.6	24	9.9	9	6.5	4	2.5
4 times a year or less	31	13.4	20	8.3	8	5.8	27	17.0
Once every 1 or 2 months	109	47.2	126	52.1	57	41.0	64	40.3
Twice a month	68	29.4	68	28.1	61	43.9	49	30.8
Once a week	10	4.3	4	1.7	4	2.9	15	9.4
Total	231	100.0	242	100.0	139	100.0	159	100.0

TABLE Q5.11

HEAD START PARENT INTERACTION WITH TEACHER BY REGION

Number of times talked to Teacher	REGION Northeast N	 %	 Southeast N	 %	 Southwest N	 %	 West N	 %
Did not talk	22	9.2	81	30.8	26	17.4	14	8.2
1	67	28.0	62	23.6	29	19.5	51	29.8
2	65	27.2	50	19.0	29	19.5	41	24.0
3	35	14.6	25	9.5	24	16.1	19	11.1
4	17	7.1	22	8.4	15	10.1	21	12.3
5 or more times	33	13.8	23	8.7	26	17.4	25	14.6
Total	239	100.0	263	100.0	149	100.0	171	100.0

TABLE Q5.12

HEAD START PARENT INTERACTION WITH CHILD BY REGION

How often does child ask parents for help?	REGION Northeast N	 %	 Southeast N	 %	 Southwest N	 %	 West N	 %
Once a month	45	20.9	15	5.9	19	13.6	28	17.6
2 or 3 times a month	13	6.0	12	4.7	2	1.4	7	4.4
once a week	38	17.7	31	12.3	20	14.3	26	16.4
several times a week	44	20.5	42	16.6	43	30.7	51	32.1
every day	75	34.9	153	60.5	56	40.0	47	29.6
Total	215	100.0	253	100.0	140	100.0	159	100.0

TABLE Q5.13
PARENT INVOLVEMENT IN HEADSTART CENTER BY AUSPICES

AUSPICES

How Often Did You Help at the Headstart Center?	Public School		College or Univ.		Religious Organiza-tion		Nonprofit Group		Local CAA		Other	
	N	%	N	%	N	%	N	%	N	%	N	%
Did not help	16	23.2	5	38.5	3	42.9	6	37.5	74	27.9	17	48.6
Less than 4 times a yr.	8	11.6	2	15.4	0	0.0	1	6.3	22	8.3	2	5.7
4 times a year	8	11.6	1	7.7	1	14.3	0	0.0	24	9.1	3	8.6
once a month	9	13.0	1	7.7	1	14.3	3	18.8	35	13.2	5	14.3
twice a month	7	10.1	0	0.0	2	28.6	0	0.0	50	18.9	4	11.4
once a week	21	30.4	4	30.8	0	0.0	6	37.5	60	22.6	4	11.4
Total	69	100.0	13	100.0	7	100.0	16	100.0	265	100.0	35	100.0

TABLE Q5.14
HEAD START PARENT INVOLVEMENT WITH OTHER PARENTS BY AUSPICES

How Often Did You Meet with other Head Start Parents?	Public School		College or Univ.		Religious Organiza-ation		Nonprofit Group		Local CAA		Other	
	N	%	N	%	N	%	N	%	N	%	N	%
Did not meet	5	7.8	0	0.0	1	16.7	2	13.3	15	5.8	1	3.0
4 times a year or less	10	15.6	1	7.7	1	16.7	2	13.3	33	12.8	0	0.0
once every 1 or 2 months	28	43.8	6	46.2	1	16.7	4	26.7	113	43.8	20	60.6
Twice a month	19	29.7	6	46.2	3	50.0	4	26.7	83	32.2	11	33.3
Once a week	2	3.1	0	0.0	0	0.0	3	20.0	14	5.4	1	3.0
Total	64	100.0	13	100.0	6	100.0	15	100.0	258	100.0	33	100.0

TABLE Q5.15

HEAD START PARENT INTERACTION WITH TEACHER BY AUSPICES

AUSPICES

Number of Times Talked with Teacher	Public School		College or Univ.		Religious Organizations		Nonprofit Group		Local CAA		Other	
	N	%	N	%	N	%	N	%	N	%	N	%
Did not talk	17	23.9	3	23.1	1	14.3	2	11.8	25	9.3	17	48.6
1	14	19.7	4	30.8	4	57.1	4	23.5	71	26.5	8	22.9
2	12	16.9	2	15.4	1	14.3	3	17.6	66	24.6	5	14.3
3	13	18.3	3	23.1	0	0.0	2	11.8	38	14.2	3	8.6
4	8	11.3	0	0.0	0	0.0	3	17.6	28	10.4	0	0.0
5 or more times	7	9.9	1	7.7	1	14.3	3	17.6	40	14.9	2	5.7
Total	71	100.0	13	100.0	7	100.0	17	100.0	268	100.0	35	100.0

TABLE Q5.16

HEAD START PARENT INTERACTION WITH CHILD BY AUSPICES

AUSPICES

How often does child ask parent for help?	Public School		College or Univ.		Religious Organizations		Nonprofit Group		Local		Other	
	N	%	N	%	N	%	N	%	N	%	N	%
Once a Month	13	20.3	0	0.0	1	14.3	5	29.4	40	15.9	1	3.0
2 or 3 times a month	4	6.3	0	0.0	1	14.3	1	5.9	10	4.0	0	0.0
once a week	11	17.2	1	7.7	2	28.6	1	5.9	46	18.3	4	12.1
several times a week	18	28.1	1	7.7	1	14.3	2	11.8	70	27.8	4	12.1
Every day	18	28.1	11	84.6	2	28.6	8	47.1	86	34.1	24	72.7
Total	64	100.0	13	100.0	7	100.0	17	100.0	252	100.0	33	100.0

TABLE Q5.17

HEAD START PARENT INTERACTION WITH TEACHER BY CENTER ETHNICITY

	CENTER ETHNICITY							
	Predominantly Black		Predominantly White		Predominantly Black		Predominantly White	
Number of times Talked with teacher	N	%	N	%	N	%	N	%
Did not talk	53	26.9	9	5.5	3	8.6	25	22.9
1	46	23.4	42	25.5	9	25.7	26	23.9
2	36	18.3	49	29.7	7	20.0	18	16.5
3	19	9.6	26	15.8	4	11.4	20	18.3
4	15	7.6	21	12.7	3	8.6	7	6.4
5 or more times	28	14.2	18	10.9	9	25.7	13	11.9
Total	197	100.0	165	100.0	35	100.0	109	100.0

TABLE Q5.18

HEAD START PARENT INTERACTION WITH CHILD BY CENTER ETHNICITY

	CENTER ETHNICITY							
	PREDOMINANTLY BLACKS		PREDOMINANTLY WHITE		PREDOMINANTLY BLACK		PREDOMINANTLY WHITE	
How often does child ask parents for help?	N	%	N	%	N	%	N	%
Once a month	15	8.0	31	19.9	1	3.2	19	19.6
2 or 3 times a month	4	2.1	11	7.1	1	3.2	3	3.1
Once a week	17	9.1	30	19.2	8	25.8	22	22.7
Several times a week	38	20.3	44	28.2	12	38.7	20	20.6
Every day	113	60.4	40	25.6	9	29.0	33	34.0
Total	187	100.0	156	100.0	31	100.0	97	100.0

TABLE Q5.19

PARENT INVOLVEMENT AT HEAD START CENTER BY CENTER ETHNICITY

	CENTER ETHNICITY							
	PREDOMINANTLY BLACK		PREDOMINANTLY WHITE		PREDOMINANTLY BLACK		PREDOMINANTLY WHITE	
How often did you help at the Head Start Center?	N	%	N	%	N	%	N	%
Did not help	72	38.3	43	25.9	7	20.6	35	32.7
Less than 4 times/yr.	17	9.0	12	7.2	2	5.9	12	11.2
4 times a year	21	11.2	16	9.6	2	5.9	12	11.2
Once a Month	24	12.8	15	9.0	12	35.3	10	9.3
Twice a month	24	12.8	34	20.5	4	11.8	13	12.1
Once a week	30	16.0	46	27.7	7	20.6	25	23.4
Total	188	100.0	166	100.0	34	100.0	107	100.0

TABLE Q5.20

HEAD START PARENT INVOLVEMENT WITH OTHER PARENTS BY CENTER ETHNICITY

	CENTER ETHNICITY							
	PREDOMINANTLY BLACK		PREDOMINANTLY WHITE		PREDOMINANTLY BLACK		PREDOMIANTLY WHITE	
How often did you meet with other Head Start Parents?	N	%	N	%	N	%	N	%
Did not meet	19	10.6	2	1.3	1	2.9	8	7.8
4 times a year or less	10	5.6	22	13.9	3	8.8	17	16.7
Once every 1 or 2 months	92	51.4	69	43.7	15	44.1	40	39.2
Twice a month	54	30.2	53	33.5	14	41.2	34	33.3
Once a week	4	2.2	12	7.6	1	2.9	3	2.9
Total	179	100.0	158	100.0	34	100.0	102	100.0

TABLE Q5.21

CORRELATIONS BETWEEN PARENT INVOLVEMENT INDICES AND CENTER ACTIVITIES

	HEAD START CENTER ACTIVITIES		
Parent Involvement Indices	Academic Knowledge & Skills Activities	Social Knowledge & Skills Activities	Dramatic/Expressive Play Activities
How often do you help at the Head Start Center?	-0.1179* (371)	-0.0291 (371)	0.0013 (371)
How often do you meet with other Head Start Parents?	-0.0157 (356)	0.0110 (356)	-0.0193 (356)
Number of Times Talked with Teacher.	-0.1050* (377)	0.0350 (377)	0.0129 (377)
How often does child ask parents for help?	0.0103 (352)	0.0330 (352)	-0.1386**(352)

Question 6: Preschool Experience of Non-Head Start Children

In the original anaylses, almost half of the non-Head Start children had experienced some kind of out-of-home preschool. In addition, many Head Start children had some kind of preschool experience before entering Head Start. The present analysis identified 1034 Head Start children in the data base, of whom 121 had some preschool in addition to Head Start. Also identified were 555 children who did not go to Head Start (i.e., the comparison children). Of these, 211 attended some kind of preschool before entering the public schools. The present study examined these four groups of children (Head Start children with and without some other experiences, and non-Head Start children with and without some kind of preschool experience) on a number of dimensions. Reported in this section are the comparisons with respect to the kind of non-Head Start programs they attended, their family backgrounds, and the perceptions of these groups of children held by their public school teachers.

What type of program did the non-Head Start children attend? What type of program did these Head Start children with other preschool experience attend?

The predominant preschool experience for the non-Head Start children was a nursery school (46%), with day care (30%) the second most predominant. This was reversed for the non-Head Start experiences of Head Start children who had attended some other preschool before Head Start. For these children the predominant non-Head Start experience was day care (46%) and then nursery school (25%). This may reflect the higher per capita income of non-Head Start families (see below) for whom day care may not be as intensely needed as Head Start families.

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How long did the children in this sample attend their respective preschools?

Only Head Start children tend to have a one year experience in preschool with relatively little variability around that figure.

The children who attended preschool before enrolling in Head Start fall into two groups: a) Those who had just one year including Head Start and some other experience, and b) Those who had 6-12 months of some other preschool and then a full year of Head Start.

Non-Head Start children who attended some other preschool program also fall into two groups: a) Those who attended for one year or less and, b) Those who attended for 1-2 years.

The length of enrollment in preschool is a factor which distinguishes between Head Start children and non-Head Start children. The latter group showed much greater variability in the length of their preschool experience than the Head Start children.

What differences are there in family background between Head Start, non-Head Start, Head Start plus other preschool experiences, and no preschool groups?

The Head Start-only families in this sample had the lowest per capita income of all groups. Within the Head Start group, those families who sent their children to an additional preschool had a slightly higher per capita income than the Head Start-only families. The non-Head Start families were all significantly higher in per capita income than the Head Start families, but those who sent their children to some other non-Head Start preschool had the highest per capita income of all groups in the study. Those non-Head Start families who did not send their children to any preschool also had significantly higher income than the Head Start families, but a little lower income than the families who sent their children to some non-Head Start program.

The Head Start families include mothers with the lowest level of completed education. Families who sent their children to other, non-Head Start preschools are among those with the highest levels of completed education of the mothers. The non-Head Start families with no preschool fall in an intermediate position of educational achievement. Non-Head Start families with preschool have the highest level of mothers who completed high school and had more than high school backgrounds.

In general, there is significant differentiation between Head Start families and non-Head Start families despite the fact that all of the children selected were from the same public school classes. Clearly, within the same communities, Head Start families come from a lower SES than families who send their children to other kinds of preschools. Indeed, in the communities selected for this study, Head Start families are in a lower SES than families who chose not to send their children to any preschool program before kindergarten.

The ethnic difference among the families in this sample appear to be tied to the economic differences among them. Families which send their children to Head Start (with or without some other kind of preschool experience before Head Start) are predominantly Black families but with a moderate (one third to one quarter) number of White families. Those in the non-Head Start groups are very heavily White. Elsewhere in this report, it has been found that the Black families in the present sample tend to be larger, with lower income, and with less education for the mother than White families and that, with the present findings added, tend to be in Head Start rather than non-Head Start preschool programs. The White families who send their children to Head Start have considerably lower incomes and less mothers' education than the White families who send their children to other preschools.

Are the children in these preschool categories equality distributed across regions?

The regional distribution of Head Start children is distinct from that of other children in this sample. Approximately 2/3 of the Head Start-only children are located in the eastern section of the country, equally divided between Northeastern and Southeastern sections. The pattern of preschool attendance which includes some other preschool first and then enrollment in Head Start is significantly underrepresented in the Northeast and is over represented in the Southeast. This is probably a reflection of the lack of kindergartens in the Southeast. Most (see below) of the Head Start children in the Southeast are one year older and enrolled in first grade rather than kindergarten compared to the Head Start children in the rest of the country. Therefore, the preschool experience of the Head Start children (predominantly Black) of the Southeast was a kindergraten level experience. This meant that any prekindergarten experience for these children would be in addition to Head Start. Thus, the Head Start plus other preschool group of children are primarily Black, primarily from the Southeastern section of the country and primarily older than other Head Start children. They would have been tested for this study in their first grade rather than in their kindergarten.

Are there differences in the type of play material in the homes of the Head Start, non-Head Start with and without preschool and non-preschool groups?

Of the dozen play materials which were mentioned in the parent interview, Head Start families reported a presence of only three categories of materials in the same proportion as non-Head Start children, or even children who did not go to preschool. It was only in the presence of crayons and paper, hammer and nails, and catalogues and magazines that Head Start homes were equal to non-Head Start homes. The categories of play materials which were found significantly less often in Head Start homes than in all the other homes included: plants, put-together toys, play dough, magic markers, puzzles, scissors. It should be noted that families who did not send their children to any preschool reported the presence of these toys and materials to a significantly greater extent than the Head Start families.

Are there differences in the amount of verbal interaction between parents and children in Head Start and non-Head Start families? Is there a difference in the pattern of TV watching?

There is no difference in the rates of verbal interaction reported by the several categories of parent in this sample. There is a difference, however, in the pattern of TV watching. The Head Start children are described as watching TV more often than any other group (almost 40% watch more than 3 hours every day), and the Head Start plus other preschool watch TV the least often (40% watch no more than a few hours each week). Once again, this difference between the Head Start only and the Head Start plus other groups may be a reflection of the older age of the latter groups and the fact that they were attending first grade rather than kindergarten at the time of the study. First graders may have less time for TV than kindergarteners.

Are there differences in parental expectations among the families of Head Start and non-Head Start children?

There are essentially no differences in the expectations which parents hold about the success their children will have in school. Three quarters of all parents expect that their children will perform from "average to good" in public school. However, Head Start parents expect their children to complete their education when they graduate from high school whereas parents who send their children to other preschool expect their children to attend a four year college. The parents of children who did not attend any preschool have an educational expectation pattern which is very similar to that held by the Head Start parents. These differences are related to family income in a very specific way. The higher the income, the further the child is expected to reach in education. However, income is not related to the parents' expectations of how well the child will do in school. Essentially the same finding is present with respect to the ethnicity of the family. Whites expect their children to go further in school than Blacks, but there is no difference in how well they expect their children to perform in school.

How do the public school teachers perceive the Head Start children compared to the non-Head Start children? Are these differences related to family background?

Public school teachers were asked to rate all sample children on a series of scales which were statistically combined into two dimensions as follows:

1. Socially mature, popular with peers, and academically motivated (called, "The All American Child" scale).

2. Assertive, protective of rights, enjoys the company of adults and children (called "Assertiveness scale).

There are regional differences in the ratings given to children by public school teachers. Teachers in the Northeastern and Southeastern sections of the nation rated all children significantly lower on the All American scale than teachers in the Western sections of the country. However, only the children in the Southwest were rated low on Assertiveness by their teachers. Whites were always rated higher on the All American scale and lower on the Assertiveness scale than the ratings given to Black and other minority children.

Despite these regional and ethnic differences in teacher ratings, there are real, and independent differences in these ratings of children depending upon the preschool experience they acquired. These differences follow Head Start, non-Head Start distinctions consistently. Head Start children (with or without other preschool experience) are significantly lower in the ratings they receive on the All American scale (non-Head Start children who go to preschool receive the highest ratings on this dimension). At the same time, Head Start children (with or without other preschool experience) are rated as significantly more Assertive than non-Head Start children (children with no preschool experience are rated as the least Assertive of all groups).

These ratings by public school teachers are also related to the family background of the children in very unique ways. Income, mothers' education and the amount of academically stimulating materials/activities which go on in the home are all positively related to scores on the All American scale but bear no relationship with scores on the Assertiveness scale. Assertiveness appears to be a property which public school teachers perceive in Head Start children regardless of the family background (except for the Head Start children in the Southwest where cultural factors in the family may mitigate against assertive behavior).

Technical Discussion

The "comparison group" in a study of the effects of Head Start is a multifaceted collection of children and must be examined piecemeal in order to best understand the nature of Head Start. Three major comparison groups are present in this sample and despite the fact that all children (including the Head Start sample) were drawn from the same classrooms, these groups are quite different from each other. In addition to children who attended Head Start alone, there are children who attended some other preschool before attending Head Start, there are children who attended non-Head Start preschools and there are children who attended no preschool prior to entrance into the public schools.

The Head Start children come from the lowest SES in the communities in which these public schools are located. This is not, however, the only important difference between Head Start children and the others in the study. In fact, the Head Start group seems to have two distinct subgroups: the first and by far the largest are from the lowest SES in this sample, and are expected (by their parents) to have the shortest academic career of all the children in the study, include children from all the ethnic groups, and typically had just one year of preschool experience in Head Start. The other Head Start group comes from families with somewhat higher incomes and with mothers with more education, are from all ethnic groups, but were sent by their parents to a preschool first before they were old enough to attend Head Start and then sent to Head Start for the last year before public school. The majority of the preschools to which they went before Head Start were day care arrangements and the majority of the children attended these day care arrangements on a full time basis. Mothers of these children have higher academic expectations for the children than do the mothers of Head Start only children. Although these children perform, on academic and affective measures used in this study, similarly to the Head Start children, their rank order position on almost every measure is between the non-Head Start children (generally of higher SES) and the Head Start only children.

The non-Head Start children are also made up of two distinct groups. The first is a group who attended some other preschool. This group, in turn is composed of two groups, those who attended for a part year and did not attend full time (described by their mothers as a nursery or play group) and those who attended for a full year or more and who went full time (usually described by their mothers as attending a day care arrangement). These children came from the families with the highest incomes in the present sample (almost double that which the Head Start only families had). Three quarters of these children came from White families and they are distinguished from the Head Start only children by a much higher proportion of play materials in the home which are often considered to facilitate learning.

The second of the non-Head Start groups was that group which attended no preschool before entering public schools. These children are very similar to the non-Head Start other

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preschool group except that the family income is somewhat lower than the preschool group. This may be a reflection of the reduced rate of mothers in the work force associated with the fact that all of these children were taken care of in their home before entering public school. Since all other background factors are similar for this group and the non-Head Start group who attended another preschool, it is possible to attribute the only significant difference between these two non-Head Start groups to the fact that one of them had preschool experience and the other did not. This difference is in the magnitude of the rating assigned by public school teachers on the All American scale. These no preschool children were rated higher than the Head Start groups on this dimension, but lower than the non-Head Start other preschool group. It does not seem likely that there would be a bias in the teachers' rating style which would allow them to distinguish between these two groups. The difference in the ratings seem more likely to reflect real differences in the children than differences in the teachers' style.

The issue of teacher bias in rating children is a critical factor in assessing the differences between Head Start and non-Head Start children found in this study. Correlations between teacher ratings on the All American scale and the several indices of SES are all positive and significant. Approximately 8-10% of the variance of teacher ratings on this scale is associated with variance on SES. This is a large amount of associated variance and it might be that these differences have more to do with the tendency of teachers to assign children from higher SES higher scores on the All American scale regardless of the preschool experience of the child. The fact that lower SES children are found in the Head Start groups would then account for the differences to the consequences of the preschool experience. The analyses which addressed this issue are presented in the next question of this report, but they can be summarized here.

If the SES properties of the child contributed to the teachers judgment, then it would be reasonable to partial the SES contribution out of the ratings. This remaining variance is then partitioned across the several cells of preschool experience. The results of this procedure indicate that with the role of SES heavily reduced, there is still a significant difference among the preschool groups in the ratings on the All American scale and these differences are in the same direction and order as the unadjusted differences. Note that the full range of possible teacher biases have not been eliminated from this analysis. The only part of the teacher bias which has been removed is that associated with the SES of the children. This means that the notion that children who attended Head Start are truly distinguishable from children who did not attend Head Start by their lower scores on the All American scale remains a viable and important explanation of the findings.

One other factor contributes to this conclusion. The difference between Head Start and non-Head Start children in the judgment of these teachers is in the degree of their assertiveness. In this case, however, Assertiveness scores are uncorrelated with any of the SES or family background factors. They are however, strongly related to ethnicity. Black children received higher scores on assertiveness than White children. It is possible that public school teachers simply rate Black children higher on assertiveness regardless of the preschool experience of the children. However, the Head Start groups are about equally divided between Black and White children although the non-Head Start preschool children are very predominantly White. In order to remain consistent, the method chosen to deal with this issue of SES, namely the ethnicity variable was added to the SES variable as adjusters (partialing variables) and the remaining Assertiveness variance was then partitioned across the several categories of preschool experience. Once again, the findings remained the same as the unadjusted findings. Head Start children are indeed perceived by their teachers as more assertive than non-Head Start children, and this cannot be entirely explained in terms of the SES or ethnic differences among the children. It is likely that this difference in perception has to do with the kind of children they are and this is likely to have to do with the preschool experience which they acquired before entering public school.

Conclusions

The several groups in this study are quite different in their family backgounds and in the nature of their preschool experiences. Direct comparison among these groups is not feasible. Adjustments for the differences on these home and school factors is necessary in order to understand the effects of preschool experiences. The remaining differences, including the differences in the length of time the children were enrolled in a preschool arrangement are considered, in additional question discussions, such as questions 7 and 12.

TABLE Q6.1. Frequency of Each Type of Preschool Experience

Preschool Experience	Number of Children
Head Start	913
Head Start Plus Other Preschool	121
Non-Head Start	
With Preschool	211
No Preschool	344

TABLE Q6.2. Frequency of Type of Preschool Experience for Non-Head Start Versus Head Start Children

	Type of Preschool (Number of Children)					
Children:	Nursery School	Day Care	Play Group	Kinder-garten	Other	Total Children
Non-Head Start	98	67	8	44	31	211*
Head Start	30	55	2	14	29	121**

*37 Children experienced more than one preschool experience

**9 Children experienced more than one other preschool experience

TABLE Q6.3. Length of Preschool Attendance by Type of Preschool Experience

LENGTH OF PRESCHOOL ATTENDANCE
(% of Children)

Type of Experience	Number of Months				
	1-6	7-13	14-19	20-20+	Missing Data
Head Start Only	4.5	49	14	7.5	25
Head Start Plus Other	6.5	40.5	17	33	2.5
Other Preschool	22	38	17	20	2.5

TABLE Q6.4. Mean Per Capita Income by Type of Preschool Experience

Preschool Experience	Mean Per Capita Income (1977 dollars)
Head Start	1287
Head Start Plus Other	1360
Non-Head Start	
Preschool	2439
No Preschool	1999

TABLE Q6.5. Level of Mothers' Education by Type of Preschool Experience

	Mothers' Education (% Mothers in Sample)		
Preschool Experience	Less than High School	High School	More than High School
Head Start	47	42.8	10
Head Start Plus Other	31	47.7	21
Non-Head Start			
Preschool	16	49.7	34
No Preschool	33.4	47.7	18.8

TABLE Q6.6. Distribution of Family Ethnicity for Each Type of Preschool Experience

	Family Ethnicity (% of families in sample)			
Preschool Experience	Black	White	Hispanic	Other
Head Start	36.4	28.4	7.1	28.1
Head Start Plus Other	49.6	32.2	12.4	5.8
Non-Head Start				
Preschool	20.4	71	3.8	4.7
No Preschool	29.7	58.7	6.7	4.9

TABLE Q6.7. Percent of Children Residing in Geographical Regions for each Type of Preschool Experiences

	Regional Area (% of children in sample)			
Preschool Experience	Northeast	Southeast	Southwest	West
Head Start	31.3	31.3	17.7	19
Head Start Plus Other	14.9	33.9	22.3	29
Non Head Start				
Preschool	28.9	21.8	16.1	33
No Preschool	35.5	20.6	21.2	22

Question 7: Performance of Head Start Children in Public Schools.

The initial analysis of the transition data showed that some effects on academic and social development associated with Head Start attendance could be discerned. The present analyses continued examining some of these issues to determine if Head Start effects are distributed equally across regions of the country, are associated with the kinds of activity emphases that were offerred in different Head Start centers, are associated with family background factors, or are associated with patterns of parent involvement in the Head Start centers.

Are Head Start effects distributed equally across regions of the country?

There is one effect, strongly associated with Head Start rather than with any other kind of preschool experience, which is found in all regions except the Southwestern section of the country. This pervasive effect is reflected in the measure called "Assertiveness" which is derived from public school teachers' ratings of their children. These teachers rate Head Start children as more assertive than the other children in their classes in the Northeastern section of the country where most of the Head Start children and their comparisons are White, in the Southeastern section where most of the Head Start children and their comparisons are Black, and in the Western section where there are relatively large numbers of both Black and White Head Starters and comparison children. The Southwestern section of the country has a preponderance of "Other" (Hispanic and Native American Indian) children in Head Start, and there the public school teachers did not see Head Start children as any more Assertive than other children.

Performance on the Wide Range Achievement Test (WRAT) indicated few effects attributable to Head Start and these few were scattered over just two of the regions. In the Southeast section of the country (primarily a Black Head Start group contrasted to a Black comparison group all of whom were first graders rather than kindergarteners), Head Start children were significantly ahead of the comparison group on one of the math subtests (oral arithmetic) and were slightly ahead on another mathematics subtest and a visual/motor task involving copying marks. In the Southwestern section, the Head Start children (heavily Hispanic and Native American Indian) were significantly better than the comparison children on the copying marks subtest and tended to be ahead on counting dots. Note that the Head Start centers in both the Southeastern and the Southwestern sections of the country had the strongest emphasis on academic activities of all the centers in the country.

Are the outcomes of Head Start associated with the kind of activity emphases that were offerred in the different centers?

Although centers which emphasized academic activities tended to be concentrated in the Southeastern and Southwestern sections of the country (2-3 of the 8 WRAT subtests showed slightly higher scores for the Head Start children), the trends were not stable enough to suggest a significant relationship between the kind of activities which were emphasized in a center an the overall performance of the Head Start children on the WRAT in public school. However, when the length of time a child attended Head Start prior to entering public school is considered, academic activity emphases do show an effect. The longer Head Start attendances are associated with significantly higher scores on the "Naming Letters" subtest on the WRAT, when that attendance occurs in centers which emphasize academic activity.

A few trends within some regions are discernible, which may reflect the unique socio-educational processes in those regions. Head Start centers in the Southwest which emphasize academic activities show higher performance on "Letter Recognition" than centers in the Southwest that do not emphasize academic activities. This is not found elsewhere and may be unique to these children. At the same time children who graduate from Southwestern centers which emphasize social development show significantly higher "Spelling and Reading" scores than children who graduate from Southwestern centers that do not emphasize social development activities. However, the effect of this activity emphasis in the Northeastern centers is lower performance on some reading and mathematics subtests. Finally, Southwestern centers which emphasize dramatic and expressive play activities have children with significantly lower scores on "Spelling and Reading" whereas exactly the opposite effects are found among children who attended Southeastern centers emphasizing dramatic and expressive play activities.

In terms of social-emotional outcomes, it is in the Southeastern, Northeastern, and Western sections that consistent effects of activity emphases on outcomes are found. Here, higher center scores on expressive/dramatic play are associated with higher assertiveness scores. It should be noted that the lack of such a relationship between activities and assertiveness in the Southwest is confounded by the fact that relatively low assertiveness scores were found in Head Start children in this region. It is here that most of the Hispanic and Native American children on the data base are found.

Are Head Start effects associated with family background factors?

The most consistent finding related to parental/family background has to do with the social/motivational outcomes of Head Start. These outcomes are based on teacher ratings of children in public schools and have been reduced to two major variables. 1) "All American Child" (high scores indicate that the teacher judges the child to be an independent learner; not introverted; task oriented and persistent; popular with other children; likely to be a high academic achiever; and not conflicted over asking for help), 2) Assertiveness (high scores indicate that the teacher judges the child to be high in enjoyment of and desire to have contact with adults and other children; relates aggressively with others; has a low tolerance for intrusions). There are clear relationships between family background factors and the "All American" scale, and no relationship between these factors and the "Assertiveness" scale. For a full discussion of these socia-motivational outcomes, see Question 8 of this Report.

There is a very diverse pattern of relationships among family background measures and the WRAT scores used in the present study. This diversity reflects the regional diversity of the sample which in turn carries a host of cultural, ethnic, and socioeconomic differences. For example, in the Southeast where almost all of the children are Black first graders and where almost 20% of the Black children went to some preschool program other than Head Start, the relationship between the family background measures (mothers' education family income, and a home stimulation index) and the 8 WRAT subtests were generally weak and in some cases negative. However, these relations were considerably weaker for the Head Start children than for the other children in the region, so that this can be considered something of an Head Start effect.

Similarly, in the Northeast where most of the children are White and 20% of them went to some preschool other than Head Start, the relations between the family background measures, and in particular, the home stimulation index, and the WRAT measures are quite high and positive. Here too, the relations are weaker but still high for the Head Start children alone which suggests a possible Head Start effect for these White children as well. However, in the West and in the Southwest, the relations between family background and WRAT are moderate and very much the same for the Head Start and the other preschool (or no preschool) groups in those regions. Generally, there is tendency for higher SES families to have children who perform higher on some of the WRAT measures but this is less true for Head Start children and particularly Head Start children in the Southeast.

Are Head Start effects associated with patterns of parent involvement in the Head Start center?

There is no evidence that any form of parent participation in the center, with children, or with other parent is associated with any of the outcome measures.

Technical Discussion

This chapter presents the results of the regression analyses in which certain policy-related properties of Head Start are used as predictors of public school performance. Although several analyses of this sort were reported in the original Transition Study, the secondary analysis of the data revealed some shifts in the numbers of the experimental groupings into which children were sorted. It was also desirable to reconstruct the dependent variables through data reduction and standardization procedures. In addition, it was important to reconstruct some of the home variables and enter them into the regression equations in order to more fully specify the analytic model. Thus, there is substantial reason to re-examine the issue of the impact of Head Start variables on public school performance. We have also noted the ubiquitous effects of region on a variety of relevant issues, so that it is desirable to run these analyses blocking on (i.e., within) regions.

Head Start Activity Variables. One important set of factors, which was not used to predict Head Start effects in the original Transition Study, is measure of Center activities. In order to add these factors to the analyses, the secondary analysis included an examination of the Center facilities and resources inventory. This instrument gathered ratings made by Center directors, of a list of activities which might be engaged in at the Center. Each activity was rated for its importance and for the amount of time spent on the activity at the Center. These ratings were submitted to a factor analytic procedure (principal components analysis, varimax rotation, reported in Question 1). Three well- articulated factors emerged which were named, "Academic Activities," "Social Activities," and "Expressive and Dramatic Play." A factor scoring algorithm was used which maintained orthogonality across factors (a major advantage when using regression models) and which standardized the distribution of scores. Thus, each Center received three activity scores, which were then used individually to relate to other Center-Level variables.

The outcome analyses reported in this Chapter were carried out at the child level of aggregation. The questions asked have to do with the impact of preschool generally, and Head Start in particular. Within the Head Start analyses, the effects of various kinds of activities carried out in the center are studied for their impact on Head Start children. Note that a very serious assumption is being made when the Head Start activities are tagged to individual children, and this assumption is not made when a score on the Pre-school variable (i.e., No preschool, Head Start only, Head Start plus another preschool, and Other preschool only) is tagged to a child's file. The assumption made is that the measure was in fact administered to all children who are comparably scored. If the score is from the Preschool variable, then it is not an assumption that the child did in fact attend the preschool which the score denotes. We are reasonably sure that all children have been correctly categorized by their preschool experiences (See Chapter 2). However, the center activities score is derived from the ratings made by the center directors and not from a measure of the activities which were applied to that particular child. The center directors' ratings refer to the estimate of what goes on in the center and does not reference a particular group or class. There is no way of knowing whether all children who are tagged with the same activities score did necessarily receive the experiences which are assumed to occur when that activity is present in a center.

The situation is even further complicated when the configuration of activity scores at each center is considered. Clearly such configuration scores are more meaningful refelections of the potential experiences available to children attending each center. Thus, a center which is scored high on the academic activity scale and almost as high on the social activity scale, may not provide the same kind of experiences to children who come from a center which is also scored high on academic activity and high on dramatic play activities. The meaning of the academic scale may shift under these conditions and the nature of the treatment administered to the children may be discernibly different despite the similarity of academic activity scores.

Unfortunately, it is not possible to deal with this question in the present study. The number of activity configurations into which the centers must be bitted is too large to be manipulated given the number of centers available for the examination of this issue. If each of the three activity scales were simply broken down into high medium and low quartiles, then there would be nine different configurations. Since only 24 centers have enough data from which to derive the full set of activity scores, there would be no more than 3-4 centers in each configuration. This is too few to allow for useful analyses. The alternative is to deal with each activity score as a single separate property so that each center would have three separate activity scores. Each such score would then be used individually as predictors of performance in a Head Start vs. Non Head Start contrast.

Regional Effects. Another issue needs to be considered before a description of the analytic model, the variables and the findings are presented. This point has to do with the problem of regional effects.

In Question 1, it was indicated that many of the covariables of interest could not be used in an analysis using the full data base. There are very different processes occurring in the different regions of the country and to attempt an aggregation across all regions would significantly hobble many analyses. The argument was also made that because of these differences, an attempt to aggregate across regions necessarily means that important information about Head Start would be obscured in the process of adjusting for regional differences. No matter what technique is used to make the aggregation of different regions possible, the goal would have to be the achievement of comparability of essentially non-comparable regions. The fact that these regions are different is a matter of high interest to policy makers and so deserves to be examined rather than obscured. Consequently, the strategy adopted for this study is to carry out the identical analyses in each of the important regions (i.e., to block on regions) and to present findings for each of the relevant blocks.

In order to aide the reader in considering these findings, a short vignette of each region is presented here.

Northeast. Three-quarters of the sample children from this region are White and almost one-third of them attended Head Start centers which were at least 90% White in total enrollment. Almost all of the Black children attended all-Black Head Start center. Although the mean per capita income for this sample was the highest of the four regions, this was generated by the smallest percent (29%) of two working parents families in the four regions. Over 60% of the mothers had no more than a high school education and the mean family size was 4.89. Although the Northeast may be thought of as an intensely urbanized area, over two-thirds of these children came from small towns and farm areas, and only 10% came from large cities.

Southeast. Over 80% of the sample children from this region are Black, and virtually all of them attended Head Start centers which were over 90% Black in total enrollment. Over 50% of these children came from small towns or farm areas and almost all of the remaining came from medium sized cities. In addition, 90% of these children were in first grade rather than in kindergarten because Head Start experiences were during their fifth year rather than the fourth year which was typical of Head Start children in the other regions. More than 42% of these families had two working parents, but the total family income as well as the mean per capita income were the lowest in the total sample. More than 90% of the mothers had no more than a high school education and 57% of them had less than a full high school course.

Southwest. This sample had the most equitable distribution of ethnic groups of all regions: Blacks, Whites, and Other (Hispanics and native American Indians) were represented in approximately equal numbers. Over two-thirds of these child came from small towns, 80% of the mothers had no more than a high school education, and 44% of the families (the highest of all regions) had two parents working. The mean per capita income was the third highest of all regions, but because there was an average of 5.4 family members, the mean total family income was the highest.

__West__. Much like the Northeastern region, three-quarters of the children are White, over two-thirds come from small towns and rural areas, almost all of whom attended centers with 90% or more White enrollment. However, 39% of the families had two working parents, producing the third lowest total family income. This region had the highest percent (24%) of mothers with more than a high school education, and the highest percent of children who were sent to a non-Head Start preschool. In fact, over 20% of the Black children in the west were sent to "Other preschools," compared to no more than 6% in the other regions. Consequently, there was almost double (16%) the percent of children who attended preschool for 1-6 months befoe entering public school, compared to the percent in other regions.

There are sharply different properties to the sample of children and families in each of these regions. In addition, there are quite different patterns of activity emphases reported in the Head Start centers across the regions. These brief descriptions, along with the previously reported variations in the patterns of relationship between the adjusting variables (family and demographic background factors) and both the preschool variables and the outcome variables, confirms the judgment that regions should not be aggregated. Analyses should be done within region.

Once this decision is made, it is necessary to keep in mind that the regional categories simply represent a means of organizing patterns of diverse findings. They do not account for any of the unique findings. Each region is unique in a whole set of social/ethnic/economic/educational factors and it is almost impossible, with the present data base, to attempt to relate particular findings to particular aspects of the regional differences. For example, several unique findings for the Southeastern section of the country will be presented. Since the very largest majority of the children in Head Start/no preschool contrast in this region are Black children, it is possible to suggest that the findings should be attributed to the fact that the children are Black. But the Southeastern region is quite different in several other important respects including the fact that there is no public kindergarten and that all children in Head Start in this region are at very different developmental levels than the children in the other regions. Adjusting for age is not at all able to capture the confounding variance, particularly since there are so few Black children in the contrasts carried out in the other regions. Further, it is not appropriate to combine Black children from the different regions since the social and personal significance of membership in this ethnic group must vary across regions. Certainly the fact that there is no public kindergarten in the Southeastern region suggests a very different educational context present in this region which cannot be captured by the adjusting variables available in this study. It is entirely possible that the unique findings of the Southeast are, for some reason, associated only with Black children, but this cannot be either verified or explained in the present study.

Analytic Procedures. It is important to note that these analyses have been carried out at the child level of analysis. It is assumed that this is the level to which treatment is delivered although many of the policy questions related to child impact are in fact center level questions. The problem of reduced sample size at the center level of aggregation makes the analyses at this level moot. There is simply too small a number of centers to allow for an analysis at this level. Thus all outcome analyses have been carried out at the child level.

The model for these analyses is constant for all contrasts. Three SES variables, mother's education, per capita income, and home stimulation are entered into the equation first. Then the two dummy coded ethnicity variables (Black vs. all other children, and White vs. all other children) are entered. The remaining variance is then related to the predictor variable of interest by testing the significance of the R^2 increment produced by the addition of the predictor variable to the equation. Thus the contribution of the predictor variable is always examined after the contributions of the adjusting variables have been removed.

The tables presenting these findings are organized by predictor variables and are clustered into sets of findings for each region. Thus, the first contrast presented is that of Preschool vs. No Preschool within each region and across all regions combined. This constrast considers the contribution of enrollment in preschool to the total model and includes in the preschool group all children who attended any preschool for any length of time. Thus all Head Start children,all children who attended Head Start plus another preschool, and all children who attended a non-Head Start preschool are combined into the Preschool group and contrasted to all children who never attended a preschool prior to entering kindergarten. The outcome variables are presented in the first column, N's for the number of children entering into the analysis in the second column, R^2 for the adjusting model only in the next column, the F for the change in R^2 contributed by the predictor variable in the next column, and the p value for that F in the sixth column. The remaining columns include the significance levels of the Bs for each variable in the full model. The significance of the B for the predictor variable is presented in the last column.

Preschool vs. No Preschool Contrast. The effects of this variable are strongly influenced by region (Tables Q7.1A to

Q7.1D). In both the Northeast and Southeast regions several significant contributions of the preschool variable are apparent. The most important aspect of these findings is that two of the outcomes of significance are found in both regions. These are a reading measure and the assertiveness measure. The reading effects are not found in the other regions of the country and there is little evidence of a trend toward significance for these variables in the Southwest or West. There is, however, some indication that for assertiveness, there is a tendency toward significance in the Western region. Other effects in each of the regions are rare enough to be unique to each region. In all cases however, the direction of the effects is in favor of children who attended preschool over those who did not.

The variability of samples and effects in the several regions would suggest that all but the most robust findings would be obscrued if the data for all regioins were combined into a single analysis. Note that the variables involved in such an aggregation have withstood the test of homogeneity, so that such an aggregation is permissable. Divergent findings in each region will tend to cancel out when aggregated, however, and only those findings which are consistent across regions will show more significance in the aggregated sample than in the individual regional blocks. Table Q7.1E presents the findings across all regions combined.

Three outcomes show strong significance in this aggregated sample: spelling and reading words, written math and assertiveness. The significance levels here are heavily influenced by the much larger N's of the aggregated sample over the individual regions. In all regions except for the Southwest, the preschool variable contributes 2%-3% of the total variance of assertiveness and when these effects are aggregated to the total sample, the contribution of Preschool to this outcome remains very significant. This is an effect that transcends region. It is small but consistent and may be obscured by the fact that the preschool variable includes several kinds of preschool experiences. Before interpreting these findings, it is important to sort out the several kinds of preschools included here.

__Head Start vs No Preschool Contrast__. The effects in these contrasts are generally smaller than in the overall preschool vs no preschool contrast (Tables Q7.2A to Q7.2E). The only finding which remains consistent across regions has to do with assertiveness. Once again Head Start children show a significantly greater contribution to the assertiveness than children who did not go preschool, and this holds in all regions except the Southwest. It is important to note that these effects are very similar to the Preschool no Preschool contrast and suggest that the significance of that variable results from the Head Start component to the preschool variable. In other words, it seems likely that the reason that the preschool/no preschool variable is effective in contributing to assertiveness is because the preschool group contains a great many children who went to Head Start and that it is Head Start and not preschool generally that is responsible for the assertiveness findings.

The same logic would dictate that the effects in the other outcome variables which were found in the preschool/no preschool contrast, and which tend to drop out when the preschool variable is reduced to the Head Start component, are the result of the other non Head Start preschool children. Thus, the hypothesis of greatest plausibility indicates that effects of the preschool variable in academic areas is the contribution of non Head Start preschool and the effects in assertiveness are the contribution of Head Start. In order to consider this hypothesis, it is necessary to contrast Head Start with other preschool.

__Head Start vs Other Preschool__. Once again, there are no effects of this variable in the Southwest region. There is, however, a pattern in the remaining regions which is remarkable (Tables Q7.3A to Q7.3E). There are several instances of academic effects of this variable and consistent effects on the assertiveness variable. these effects are consistent across regions so that when aggregated to the full sample, the effects are clear and large. However, in every case, in every region, the sign of the beta indicates that the Head Start children show significantly higher scores on assertiveness, and the non Head Start preschoolers show higher scores than the Head Start children on academic measures. This represents a substantial verification of the hypothesis suggested above, that when preschool experiences show effects, they are differential effects depending upon whether the poreschool experience is Head Start or some other kind of preschool experience. The major contribution of Head Start to the developmental process of children is in the area measured by the assertiveness variable. This is an almost universal effect in the present sample and one which must seriously be expanded when the full story of Head Start is considered.

It is necessary to note that the non-Head Start preschoolers come from families with generally higher levels of mothers' education, family income, and home stimulation factors, although these variables have been used as adjusting variables in the analytic model. When these non-Head Start children who went to preschool are contrasted to children who did not go to preschool, there are again some instances of higher academic performance of the preschool children. In this case, the children who did not go to preschool have a slightly higher SES than the children who went to preschool and this difference in background is adjusted with the same variables used in all analyses studies reported here. Finally, it should be noted that in no instance did the children who did not go to preschool show any higher performance than the children who did go to preschool.

There are two regionally-based patterns of effects with respect to the Head Start findings that should be mentioned.

Regional effects are ubiquitous although they seem in these analyses to be random in their distribution. Two findings are remarkable however. The first is that Head Start children in the Western regions of the country (West and Southwest) show fewer differences between themselves and children who either did not go to preschool or those who went to or preschools than Head Start children in the Eastern regions (Northeast and Southeast) of the country. In the West region (as opposed to the Southwest) Head Start children showed higher scores only on assertiveness and joined the Head Start children in the Southwest in showing no other differences with any contrast group. In fact, the Southwest Head Start children did not show any differences in assertiveness, which is the most ubiquitous finding of all. In general, the Head Start children in the West region showed differences when compared to other children only on assertiveness. Head Start children in the Southwest region did not show even this difference. When these effects in the Western regions are combined with the somewhat more extensive and variable effects of the Eastern regions (see below) to form a national picture of Head Start effects, regional patterns cancel each other out.

The second regional pattern is in the eastern parts of tle country. Here the Head Start children appear to be doing less well on some reading and math measures than children who went to other preschools, but they continue to receive higher scores on assertiveness than children who went to other preschools. This is similar to the findings when Head Start children are contrasted to children who did not go to preschool at all. When academic differences occur in these contrasts, they are in favor of those who did not go to preschool. Head Start children receive higher scores on assertiveness when compared to no preschool children.

Conclusions

There are several findings of interest that need to be considered here. The first is the relatively consistent finding that public school teachers rate Head Start children significantly higher on the Assertiveness scale than they rate other children in their classrooms. This finding is discussed extensively in the next chapter on teacher perceptions and will be mentioned briefly here.

There seems to be strong evidence that Assertiveness is a property perceived in Head Start children by public school teachers which is not perceived by them to the same extent in non Head Start children whether or not these children attended a preschool. It is difficult to tell whether this is a self selection factor such that the kind of parents who choose to send their children to Head Start also provide the kind of developmental environment which facilitates Assertiveness or whether this is a true consequence of something unique in Head Start. The finding is apparent in all of the regions except the Southwestern region and this fact could support either explanation. The fact that Assertiveness is seen in such a diverse group of children (when very little else is so broadly found) suggests that the effect is most reasonably attributed to Head Start. The fact that the effect is not found in the one region in the country where a great many Hispanic children are located suggests that some pre Head Start factor may be operative. Hispanic families may tend to value assertiveness less than Black families and the lower Assertive scores may reflect these differences in cultural orientation rather than a Head start effect. There is one finding which mitigates against the self selection notion and that can be seen in Table Q7.2C, Head Start vs No Preschool (Southwest). There, several significant betas are recorded for the BLACK variable in predicting WRAT subtest scores. The signs of all of these betas are negative indicating that Black children were doing significantly less well than Other children on those subtests. However, for the Assertiveness score, the BLACK variable is not significant indicating that with respect to Assertiveness, there was no difference in the adjusted scores for the Black and Other children. In addition, when these same analyses were run separately for each ethnic group within each region, it was only in the Southwest that all Head Start groups failed to show any significant findings for Assertiveness. The interpretation of this could be that it is not the special contribution of Hispanic children that deminished the Assertiveness score, but that for some reason Head Start in the Southwest did not generate higher scores on this property. The interpretation is not an attractive one however, since the Southwest, dominated as it is by Hispanic culture, may produce a different attitude toward Assertiveness in Black families in that region than found in Black families in other regions of the country. There is, in other words, no way of deciding what the source of the difference is between the Assertiveness findings in the Southwest compared to the assertiveness findings elsewhere. What is impressive is that assertiveness seems to be so much a part of Head Start graduates in so many diverse places. In the next chapter, it is suggested that this finding may help to explain why long term effects of some preschools include at reduction of the number of at-risk children Assertiveness would certainly contribute to the ability to resist an at-risk syndrome. The point here however is that Assertiveness does seem to be a consequence of Head Start, but it is not at all clear from anything in this data base, why this would be so. Future work surely must pay attention to this problem before Head Start can be meaningfully improved in any way.

The second finding of interest is that preschool programs seem to be associated with a few higher academic scores (as measured by the WRAT) when compared to no preschool experiences. It is only in the Southeast that Head Start, as a kind of preschool, appears to be responsible for that effect. It should be noted that this finding is generally consistent with the findings of the original transition study. There it was reported that Black Head Start children, when contrasted to other Black children exhibited a "Value Added" academic performance level attributable to Head Start. The secondary analysis can serve to cast light on this finding in two ways.

First, the "Value Added" contribution of Head Start to Black children occurs almost exclusively to the children of the Southeast. There are no Black Head Start scores which exceed Black Non-Head Start scores in the Northeast or West and one small, non-significant finding in favor of Black Head Starters in the Southwest. However, the largest majority of Black children in this sample are found in the Southeast so that it is still not entirely clear whether this is a site or ethnic effect.

Second, the original analysis based the Value Added analysis on a single, total WRAT score. The secondary analyses utilized a set of WRAT sub scores generated from a factor analytic procedure. These analyses revealed positive Black Head Start effects in the Southwest on just three (out of eight) sub scores, indicating some specific but not easily explained effects of Head Start on this particular group of children.

Once again, there is nothing in the Head Start programs of the Southeast that can account for these advantages (and disadvantages). The effect could be because these children are almost exclusively Black, or because they come from lower socioeconomic conditions, or because they are a year older than most of the other Head Start children, or because there is something unique about the Southeast. It is not clear why any of these factors could serve to make Head Start effective in 3 subtests of the WRAT and not in others. What is clear is that this issue needs to be examined in much greater detail than this data base allows in order to fully understand and utilize it.

The third finding of interest is that the pattern of academic effects is so strangely distributed across regions of the country. The regions do represent substantially different psychoeducational environments and in order for Head Start to profit from this, it is necessary to understand it considerably more intimately than now is possible. If there is any major direction for research which Head Start should take in the future it is the understanding of these complex educational issues. This is likely to be the direction needed in order to increase significantly the impact Head Start might have in diminishing the cycle of poverty.

The final point that should be made is about the low magnitude of relationship between the activities emphasized in the center and the performance of the children. It is difficult to draw the conclusion that there is no relationship between the events experienced by a child over the course of a year in Head Start and the kind of performance the child exhibits in a testing situation in public school. In the judgment of the present writers, such as conclusion should not be drawn. Simply on the grounds of experimental design, that one cannot prove the null hypothesis, such a conclusion is not justified. However, there are several other issues having to do with measurement rather than design which suggests that such a conclusion is inappropriate.

The measurement of the activities at the center was accomplished by judgments of the center directors. The shortcomings of this method, as opposed to direct observation of classroom events are obvious. In addition, the assumption that all children in the sample received the treatment defined by these judgments was discussed in Chapter 1 of this report and found seriously wanting. It is not at all certain that the activity emphasis which was tagged to each child in our sample did in fact represent the experiences received by that child. It is also likely that the true curriculum delivered to each child was considerably more diffuse and multidimensional than the single activity

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emphasis score implied. One major reason why center ativities and child outcomes did not relate to each other is that activities as curriculum was probably measured with a great deal of unreliability.

The second reason why the conclusion of null effects of curriculum is inappropriate is that the outcome measures, in particular the WRAT, are not the appropriate measures for the outcome of a preschool program. It is likely that the preschool program administered in the Southeast region where the children of kindergarten age rather than preschoolers might appropriately be measured by an academic achievement instrument, but this is not true for programs designed for 4-5 year olds. The dominant developmental task of this age is the acquisition of prosocial skills in a peer environment. Exploring the environment is attractive to children of this age, but the full excitement of accumulating the pieces of information which are characteristically found in the achievement tests, and definately characteristic of the WRAT, does not occur until a little after the preschool years. the WRAT, in other word may not be the most appropriate way of measuring the kind of curriculum found in Head Start.

Whereas it ought not be expected that large academic gains are the likely outcomes of a preschool program, effects such as Assertiveness probably ought to be expected from substantial programs. The fact that only weak relationships between this effect and the measured activity emphasis of the center could be identified is, in the judgment of the present writer, supportive of the notion that the activities of the center were poorly measured. There is every reason to conclude, therefore, that the best direction for future Head Start research is toward the development of useful measures of educational input.

TABLE Q7.1A

Summary of Regression Analyses
Preschool Versus No Preschool Contrast
Northeast Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's					
						MAED	PERCAP	HOMESTM2	BLACK	WHITE	PRE/ NO PRE
Spell & Read Words	346	.010	.014	1.54							
Name Letters	346	.124	.125	.52		**$^{+}$	*$^{+}$	*$^{+}$			
Copy Marks	346	124	.134	4.01	*			**$^{+}$		*$^{+}$	*$^{-}$
Letter Recognition	346	.039	.039	.00				**$^{+}$			
Written Math	346	.017	.022	1.50							
Oral Math I (Easy)	346	.075	.077	.73				**$^{+}$			
Oral Math II (Difficult)	346	.073	.075	.74		**$^{+}$					
Counting Dots	346	.037	.038	.10				*$^{+}$			
All American	289	.080	.091	3.34				**$^{+}$			
Assertive	289	.004	.055	14.92	**						**$^{+}$

* implies $p < .05$
**implies $p < .01$
+/-indicates direction of b

TABLE Q7.1B

Summary of Regression Analyses
Preschool versus No Preschool Contrast
Southeast Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's					
						MAED	PERCAP	HOMESTM2	BLACK	WHITE	PRE/ NO PRE
Spell & Read Words	314	.164	.167	1.16			$**^{+}$	$**^{+}$			
Name Letters	314	.015	.017	.87							
Copy Marks	314	.036	.049	4.44	$*$			$*^{+}$			$*^{+}$
Letter Recognition	314	.029	.029	.18		$*^{+}$	$*^{-}$				
Written Math	314	.170	.175	1.79			$**^{+}$	$**^{+}$		$**^{+}$	
Oral Math I (Easy)	314	.003	.021	5.72	$*$						$*^{+}$
Oral Math II (Difficult)	314	.054	.064	3.26				$*^{+}$	$*^{-}$	$*^{-}$	
Counting Dots	314	.017	.019	.59							
All American	248	.089	.09	.25			$**^{+}$				
Assertive	248	.012	.028	4.01	$*$						$*^{+}$

* implies $p < .05$
**implies $p < .01$
+/- indicates direction of b

TABLE Q7.1C

Summary of Regression Analyses
Preschool versus No Preschool Contrast
Southwest Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's					
						MAED	PERCAP	HOMESTM2	BLACK	WHITE	PRE/ NO PRE
Spell & Read Words	128	.131	.150	3.95	*	$**^+$					$*^+$
Name Letters	188	.133	.133	.03					$**^-$		
Copy Marks	188	.167	.177	2.03					$**^-$		
Letter Recognition	188	.039	.039	.02							
Written Math	188	.067	.083	3.16		$**^+$					
Oral Math I (Easy)	188	.107	.112	.98					$**^-$		
Oral Math II (Difficult)	188	.063	.083	.02					$**^-$		
Counting Dots	188	.060	.070	1.92			$*^+$				
All American	157	.210	.213	.53			$*^+$	$*^+$	$**^-$	$*^-$	
Assertive	157	.060	.060	.01					$*^-$		

* implies $p < .05$
**implies $p < .01$
+/-indicates direction of b

TABLE Q7.1D

Summary of Regression Analyses
Preschool versus No Preschool Contrast
West Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's					
						MAED	PERCAP	HOMESTM2	BLACK	WHITE	PRE/ NO PRE
Spell & Read Words	264	.030	.032	.40		$*^+$					
Name Letters	264	.093	.093	.01		$*^+$	$*^+$				
Copy Marks	264	.205	.206	.13			$*^+$	$**^+$	$**^-$	$*^-$	
Letter Recognition	264	.024	.028	.99							
Written Math	264	.047	.054	1.70							
Oral Math I (Easy)	264	.074	.074	.01				$*^+$	$*^-$		
Oral Math II (Difficult)	264	.089	.089	.01							
Counting Dots	264	.031	.032	.13		$*^+$					
All American	206	.163	.164	.09		$**^+$	$**^+$				
Assertive	206	.080	.105	5.51	*				$*^+$		$*^+$

* implies $p < .05$
**implies $p < .01$
+/-indicates direction of b

TABLE Q7.1E

Summary of Regression Analyses
Preschool versus No Preschool Contrast
All Regions

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's					
						MAED	PERCAP	HOMESTM2	BLACK	WHITE	PRE/ NO PRE
Spell & Read Words	1112	.019	.030	12.17	**	$**^+$					$**^+$
Name Letters	1112	.028	.029	1.99		$**^+$			$**^+$		
Copy Marks	1112	.043	.043	.01				$**^+$			
Letter Recognition	1112	.007	.007	.47							
Written Math	1112	.014	.027	15.05	**			$*^+$	$*^+$		$**^+$
Oral Math I (Easy)	1112	.021	.024	3.52	*			$**^+$			
Oral Math II (Difficult)	1112	.042	.042	.12		$**^+$		$**^+$			
Counting Dots	1112	.009	.009	.03		$*^+$					
All American	900	.114	.114	.31		$**^+$	$**^+$	$**^+$		$**^-$	
Assertive	900	.012	.033	19.74	**				$*^+$		$**^+$

* implies $p < .05$
**implies $p < .01$
+/- indicates direction of b

TABLE Q7.2A

Summary of Regression Analyses
Head Start versus No Preschool Contrast
Northeast Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's					
						MAED	PERCAP	HOMESTM2	BLACK	WHITE	H.S./ NO PRE
Spell & Read Words	278	.022	.022	.03							
Name Letters	278	.097	.097	.00		**$^+$					
Copy Marks	278	.115	.124	2.96				**$^+$			
Letter Recognition	278	.049	.049	.04				**$^+$			
Written Math	278	.011	.012	.47							
Oral Math I (Easy)	278	.092	.093	.14				**$^+$			
Oral Math II (Difficult)	278	.047	.063	4.52	*	*$^+$					*$^-$
Counting Dots	278	.011	.012	.32							
All American	235	.032	.106	6.21	*			**$^+$			*$^-$
Assertive	235	.006	.085	19.56	**						**$^+$

* implies $p < .05$
**implies $p < .01$
+/-indicates direction of b

TABLE Q7.2B

Summary of Regression Analyses
Head Start versus No Preschool Contrast
Southeast Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's					
						MAED	PERCAP	HOMESTM2	BLACK	WHITE	H.S./ NO PRE
Spell & Read Words	242	.030	.031	.24							
Name Letters	242	.043	.045	.47			$**^{+}$				
Copy Marks	242	.039	.051	3.14							
Letter Recognition	242	.046	.048	.46		$*^{+}$	$**^{-}$				
Written Math	242	.025	.027	.47							
Oral Math I (Easy)	242	.015	.029	3.54	*						$*^{+}$
Oral Math II (Difficult)	242	.048	.060	2.96					$*^{-}$		
Counting Dots	242	.003	.003	.15							
All American	181	.124	.125	.18						$**^{-}$	
Assertive	181	.011	.039	5.04	*						$*^{+}$

* implies $p < .05$
**implies $p < .01$
+/-indicates direction of b

TABLE Q7.2C

Summary of Regression Analyses
Head Start versus No Preschool Contrast
Southwest Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's					
						MAED	PERCAP	HOMESTM2	BLACK	WHITE	H.S./ NO PRE
Spell & Read Words	148	.047	.050	.37							
Name Letters	148	.123	.125	.43					$**^{-}$		
Copy Marks	148	.232	.252	3.89	*	$*^{-}$		$*^{+}$	$**^{-}$		$*^{+}$
Letter Recognition	148	.039	.039	.02							
Written Math	148	.035	.040	.85							
Oral Math I (Easy)	148	.110	.119	1.42					$**^{-}$		
Oral Math II (Difficult)	148	.075	.085	1.50					$**^{-}$		
Counting Dots	148	.065	.079	2.01							
All American	124	.202	.203	.25			$*^{+}$	$*^{+}$	$*^{-}$	$**^{-}$	
Assertive	124	.062	.066	.59							

* implies $p < .05$
**implies $p < .01$
+/-indicates direction of b

TABLE Q7.2D

Summary of Regression Analyses
Head Start versus No Preschool Contrast
West Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's					
						MAED	PERCAP	HOMESTM2	BLACK	WHITE	H.S./ NO PRE
Spell & Read Words	178	.039	.045	1.06			$*^-$				
Name Letters	178	.136	.136	.01		$*^+$					
Copy Marks	178	.259	1260	.14			$*^+$	$**^+$	$**^-$	$**^-$	
Letter Recognition	178	.037	.039	.32							
Written Math	178	.018	.019	.25							
Oral Math I (Easy)	178	.136	.136	.01				$**^+$	$**^-$		
Oral Math II (Difficult)	178	.127	.128	.13		$*^+$					
Counting Dots	178	.047	.047	.00				$*^+$			
All American	144	.195	.195	.00			$**^+$	$*^+$			
Assertive	144	.073	.127	8.49	**				$*^+$		$**^+$

* implies $p < .05$
**implies $p < .01$
+/-indicates direction of b

TABLE Q7.2E

Summary of Regression Analyses
Head Start versus No Preschool Contrast
All Regions

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's					
						MAED	PERCAP	HOMESTM2	BLACK	WHITE	H.S./ NO PRE
Spell & Read Words	846	.017	.017	.22			$*^-$				
Name Letters	846	.026	.026	.09		$*^+$			$**^+$		
Copy Marks	846	.047	.047	.00				$**^+$			
Letter Recognition	846	.007	.008	.96							
Written Math	846	.014	.016	1.55					$*^+$		
Oral Math I (Easy)	846	.028	.029	1.14				$**^+$			
Oral Math II (Difficult)	846	.032	.032	.28		$*^+$		$*^+$			
Counting Dots	846	.011	.012	.04							
All American	684	.116	.118	1.65			$**^+$	$**^+$		$**^-$	
Assertive	684	.008	.054	32.65	**				$*^+$		$**^+$

* implies $p < .05$
**implies $p < .01$
+/-indicates direction of b

TABLE Q7.3A

Summary of Regression Analyses
Head Start versus Other Preschool Contrast
Northeast Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's					
						MAED	PERCAP	HOMESTM2	BLACK	WHITE	H.S./ OTHER
Spell & Read Words	229	.017	.046	6.87	**						**$^-$
Name Letters	229	.155	.165	2.70		*$^+$		*$^+$			
Copy Marks	229	.072	.072	.20				**$^+$			
Letter Recognition	229	.077	.079	.57				**$^+$			
Written Math	229	.026	.036	2.28							
Oral Math I (Easy)	229	.105	.115	2.28				**$^+$			
Oral Math II (Difficult)	229	.070	.099	7.22	**	*$^+$					**$^-$
Counting Dots	229	.034	.034	.04							
All American	192	.091	.119	5.79	*			*$^+$	*$^+$		*$^-$
Assertive	192	.011	.042	6.10	*						*$^+$

* implies $p < .05$
**implies $p < .01$
+/-indicates direction of b

TABLE Q7.3B

Summary of Regression Analyses
Head Start versus Other Preschool Contrast
Southeast Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's					
						MAED	PERCAP	HOMESTM2	BLACK	WHITE	H.S./ OTHER
Spell & Read Words	234	.209	.258	15.02	**			$*^{+}$			$**^{-}$
Name Letters	234	.029	.029	.00							
Copy Marks	234	.041	.042	.41				$*^{+}$			
Letter Recognition	234	.048	.061	3.22		$**^{+}$	$**^{-}$				
Written Math	234	.218	.269	10.35	**			$*^{+}$		$*^{+}$	$**^{-}$
Oral Math I (Easy)	234	.005	.008	.65							
Oral Math II (Difficult)	234	.084	.085	.30			$*^{+}$	$*^{+}$			
Counting Dots	234	.020	.046	6.18	*						$*^{+}$
All American	189	.135	.147	2.55		$*^{+}$	$*^{+}$				
Assertive	189	.039	.050	2.07							

* implies $p < .05$
**implies $p < .01$
+/-indicates direction of b

TABLE Q7.3C

Summary of Regression Analyses
Head Start versus Other Preschool Contrast
Southwest Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's MAED	PERCAP	HOMESTM2	BLACK	WHITE	H.S./OTHER
Spell & Read Words	119	.213	.224	1.62		**$^+$					
Name Letters	119	.221	.230	1.37					**$^-$		
Copy Marks	119	.174	.174	.01		*$^-$			**$^-$		
Letter Recognition	119	.025	.033	.87							
Written Math	119	.099	.103	.43		*$^+$					
Oral Math I (Easy)	119	.154	.156	.28					**$^-$		
Oral Math II (Difficult)	119	.115	.136	2.67					**$^-$		
Counting Dots	119	.057	.061	.43							
All American	103	.232	.239	.93					**$^-$		
Assertive	103	.082	.092	.99							

* implies $p < .05$
**implies $p < .01$
+/-indicates direction of b

TABLE Q7.3D

Summary of Regression Analyses
Head Start versus Other Preschool Contrast
West Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's MAED	PERCAP	HOMESTM2	BLACK	WHITE	H.S./OTHER
Spell & Read Words	173	.036	.060	4.24	*						*$^-$
Name Letters	173	.070	.071	.22							
Copy Marks	173	.170	.173	.68					**$^-$		
Letter Recognition	173	.045	.045	.02							
Written Math	173	.098	.118	3.75	*		*$^+$				*$^-$
Oral Math I (Easy)	173	.075	.076	.30							
Oral Math II (Difficult)	173	.098	.099	.11							
Counting Dots	173	.022	.022	.05							
All American	135	.148	.149	.15		**$^+$					
Assertive	135	.076	.080	.61							

* implies $p < .05$
**implies $p < .01$
+/-indicates direction of b

TABLE Q7.3E

Summary of Regression Analyses
Head Start versus Other Preschool Contrast
All Regions

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's					
						MAED	PERCAP	HOMESTM2	BLACK	WHITE	H.S./ OTHER
Spell & Read Words	755	.036	.077	33.90	**	$*^{+}$					$**^{-}$
Name Letters	755	.029	.038	6.79	**	$*^{+}$			$*^{+}$		$**^{-}$
Copy Marks	755	.031	.031	.17		$*^{-}$		$**^{+}$			
Letter Recognition	755	.009	.011	1.32							
Written Math	755	.025	.060	28.23	**				$*^{+}$		$**^{-}$
Oral Math I (Easy)	755	.020	.024	2.96				$*^{+}$			
Oral Math II (Difficult)	755	.043	.052	7.42	**	$*^{+}$					$**^{-}$
Counting Dots	755	.007	.009	1.57							
All American	609	.113	.123	6.91	**	$*^{+}$	$**^{+}$	$**^{+}$		$**^{-}$	$**^{-}$
Assertive	609	.009	.028	12.02	**						$**^{+}$

* implies $p < .05$
**implies $p < .01$
+/-indicates direction of b

Question 8: Teacher Perceptions of Head Start Children

The original analysis of public school teachers' rating of children in their classrooms showed that Head Start children were generally rated higher on some social motivational factors than other children. The interpretation of these findings is difficult until the meanings underlying these ratings are determined. The purpose of the present analysis is to extend the examination of teacher ratings to clarify their meanings, to establish a set of scales that would reliably reflect these meanings, and to determine the relationship between teacher ratings of Head Start children and family background characteristics of the children as well as their academic performance.

In order to deal with these issues, the teachers' ratings of children, as measured by subscales on the Schaefer Teacher Rating Scales and the Beller Teacher Rating Scales, were factor analyzed. Two clear and independent factors emerged. They represent the two major dimensions of meaning which underly the teacher ratings. These factors are:

I. The All American Child, composed of a combination of the following:

Independence in learning
Not introverted
Task oriented
Popular with other children
Likely to be a high academic achiever
Capable of asking for held when needed without fear or guilt

II. Assertiveness, composed of a combination of the following:

Enjoyment of and desire to have social contact with adults
Enjoyment of and desire to have social contact with other children
Aggressively relates to others
Low tolerance for frustration or intrusion.

Utilizing factor scores each child was scored on these two scales to represent teachers' perceptions discussed in the next sections.

Do public school teachers' perceptions of Head Start children vary accoding to family background? of the children?

Kindergarten teachers tend to perceive children from higher income families in which there is more stimulating materials in the home as higher on the All American Child scale. That is, teachers perceive these children as more popular, presistent, task oriented, high achievers, friendly and outgoing.

On the other had, teachers do not judge the assertiveness of children according to the character of the family background.

Is there a relationship between teacher perceptions of children and their social and academic performance in kindergarten?

Children who are rated high by teachers on the All American Scale do achieve at higher levels than children who are rated by teachers to be low on the scale. On the other hand, children who are rated high on the Assertiveness scale have the same distribution of academic scores as children who are rated low by teachers. It is possible that teacher perceptions of children on some properties such as persistence, popularity, and independence are influenced by the family background of the child and in turn influence the academic performance of the child. However, teacher rating of Assertiveness appears unrelated to the family background of the child and has no influence on the academic performance of the child.

Technical Discussion

The interpretation of teacher ratings is a difficult task generally but it is particularly difficult in the case of the Transition study data base. There are two approaches to this task. In the first approach it is necessary to distinguish between the contribution of the teacher to the ratings from the contribution of the characteristics of the children to the ratings. Teacher bias and response tendencies are well known factors which can influence ratings, and there are a number of reasons to expect that these factors will be operative in this case. In order to partial out the teacher contribution, it is necessary to have each teacher make a large number of ratings of a large number of children and to determine the consistencies of ratings over categories of children. Unfortunately the requisite number of ratings are not available so that some alternate methods will have to be devised.

The second approach is to determine the content validity of the rating scales themselves. The most reasonable way to deal with this problem is through concurrent validity procedures, correlations among sets of ratings. For example, it is important to know what the teachers intended to communicate when they made judgments of the children as high or low in aggression/hostility. These personality characteristics are not directly interpretable. Both aggression and hostility are perfectly reasonable responses of any individual to particular situations. They become inappropriate when they are applied to situations in which their expression is either harmful to others in a non-productive manner, or in which they are inadvertantly harmful to the individual expressing them. These behaviors can be seen as desirable outcomes of the developmental process by some teachers and undesireable by others in such a way that these different perceptions are not at all contradictory. What is necessary is the determination of the meanings which raters associate with these personality characteristics. Since there is a great number of other ratings of personality properties made by the same teachers about the same children, correlations of aggression/hostility ratings with all the other ratings will shed a good deal of light on these associated meanings. If all the corelations of all the variables are sorted out into coherant groups of variables by a factor analytic technique, then the meanings ascribed to the personality characteristics should emerge from the clusters. Factor structures provide measures of increased stability and are therefore of greater value than the individual variables taken alone. Of course, once a factor structure is established, each factor can serve as a single variable and can be related to other conceptually meaningful variables as well.

There is one other reason for adopting a factor analytic approach even though the original study had established several vectors of teacher ratings. The vectors established by the original investigators were judgmental rather than empirical. That is, the vectors were constructed by combining those scales which seemed to the investigators to cluster together on theoretical grounds. In order to determine the appropriate interpretation of these vectors, the logic of clustering cannot be assumed, it must rather be tested. It is necessary to search the full set of ratings to see which unanticipated variables cluster with each vector in order to check the interpretation.

One further reason for redoing the construction of vectors is that several instances of incorrect scoring were discovered in the original analysis. In particular, instances in which the polarity of an item was not reversed in order to be consistent with the direction of the scale were noted. The scale values were, therefore, not always correct. Once these changes were made, it was reasonable to then submit the full set of scales to a completely empirical analysis. This process will first be described and then the task of sorting out the teacher response bias will be addressed.

The two instruments which were used to collect teacher ratings of the children were the Schaefer Classroom Behavior Inventory and the Beller Rating Scales. The scales from each of the instruments, listed below, were entered into a principal components analysis, varimax rotation. Two components were rotated and the summary of these factors are presented in Table Q8.1.

Schaefer Classroom Behavior Inventory

Task Orientation
Extroversion/introversion
Hostility/tolerance
Popularity (single item)
Expectation of Child academic performance (single item)

Beller Rating Scales

Autonomous Achievement Striving
Aggression
Adult Dependency
Child Dependency
Dependency Conflict

The first factor contained six scales whose loading were very high (.63 to .82) and which served to define the major property of the factor. These scales were (in order of loading) Autonomous Achievement Striving, Extroversion, Task Orientation, High Academic Expectation, Popular, Low Dependency Conflict. The polarity of the scales as they related to the factor are reflected in the names of the scale. Thus, high scores in this factor would describe children who are high on each of these scales. There were no other scales which loaded higher than .33 on this factor so that it is appropriate to consider the interpretation in terms of the six highly loaded scales.

An autonomous, extroverted, task oriented, popular, nonconflicted child who leads the teacher to expect high academic achievement gives the impression of a mature, rather ideal youngster. We felt that a most appropriate names for this factor is "The All American Child". The factor scoring procedure was based on the sum of the products of the standardized raw scores times the factor loadings which is designed to capture the full variance accounted for by the factor while maintaining the independence of the factor from all other factors.

The second factor was defined by four scales whose loading ranged from .67 to .84. These scales (in order of loading) were Child Dependency, Adult Dependency, Aggression, Hostility. There were no other scales which loaded higher than .37 so that it is appropriate to interpret this factor in terms of these four scales.

It should be noted that the behaviors which describe the adult and the child dependency scales (Table Q8.2) reflect a desire on the part of the child to be close to, to be recognized by, and to be accepted by others. At the same time, these behaviors indicate a willingness to ask others for help at critical times. Note also that the measure of dependency conflict, the fear of expressing a need or desire to be close to others, does not load on this factor. Thus, this factor can be interpreted to refer to children who are oriented positively toward other people and who can accept closeness from them without fear or anxiety. This is a mature behavior pattern. How then would the presence of hostility and aggression in this factor be accounted for?

The most reasonable interpretation is that a child who has mature and positive attitudes towards others is confident enough in his own status to exhibit strong resistence to the encroachment by others into his psychological space. Intrusion, i.e., an attempt by another to displace one from one's own space, is a difficult force to resist by young children and can only be done while maintaining a relatively positive attitude toward other people generally. Thus it is a child who has a positive attitude toward relating with others and who robustly resists intrusiveness who serves as the referent for teachers who provided these ratings. However, these kindergarten teachers tend to label this robust and assertive way in which a child stands up for his rights as aggressive and hostile.

The Beller scales, which were used to gather these teacher judgments, facilitates the confusion between assertive defense of one's own space and anti-social hostility by deliberately excluding the intent of the child's physical action from the rating criteria. The behaviors involved in resisting intrusion, or in being assertive, are very similar to those involved in being overtly hostile. Unless the intent of the action is included in the criteria for judgment, it is possible to make the same judgment for two quite different intents. It seems reasonable that the judgment of ""agressive"" when combined with a judgment of ""dependent upon (i.e., likes and enjoys being with) adults and children" should be interpreted as assertive and robust in the resistance to intrusion. This is further supported by the finding that such behaviors as "cocky", "outgoing", "self serving and attention demanding" (i.e., extroversion) are not associated with this pattern of positive attitudes towards people and aggressiveness. For these reasons, we felt that an appropriate name for this factor is "Assertiveness". The factor scoring procedure is the same as for the "All American Child" factor which results in two factors entirely uncorrelated with each other.

Once the factor scores have been established, the task of determining their appropriate interpretation can be extended to the relation of these scores to other conceptually informative measures. The only other source of data for this task is in the judgments the children make of themselves. Unfortunately there are no judgments of the children made by parents which can aid in the interpretation of the teacher ratings, so that children self judgments are the only source of concurrent validity. Two sets of scores are available for this procedure. The first are the friendship choices and the second are the self judgments made on the Values Inventory for Children.

The Friendship choices measure was rejected for this procedure because it is itself highly ambiguous. The child is asked to name his friends in his class. The score is a count of the number of friends named. The response to this questions is confounded with memory, envy, desire to be liked, social sensitivity, and many other subtle factors. The interpretation of this measure as an indicator of friendships is highly suspect and consequently the use of such an ambiguous scale is rejected as a basis for determining the validity of the teacher ratings.

The Values Inventory for Children (VIC) is a psychometrically stable instrument which was further stablized in the current study by submitting the several scales to a factor analysis (principal componants solution, varimax rotation). Two factors emerged, both of which are interpretable. Table Q8.3 summarizes the factor structure.

The first factor (VIC I) is defined by the highly loaded scales of Sociability, Conformity, and me First. A child who is high on this factor seems to be field dependent and egocentric. Although it might be expected that a child rated high on the All American Child Factor would not rate himself high on this VIC factor, it is likely that All American Child score would show some variability on VIC 1. This is confirmed by the low correlation between these two scales and this supports the original interpretation of the All American Child factor.

The relationship between the Assertiveness Factor and VIC I can also be expected to be low given the interpretation of Assertiveness presented here. This is what was found.

VIC II factor is composed of two scales: Achievement Motivation (a measure of the attractiveness of school to the child) and Asocial Behavior. A child scoring high on this factor reports that he likes school and school related activities, and that he likes to play unpleasant tricks on other people. such a child may be a manipulator of others and in some, but not all cases may give the impression of being an All American Child. Thus, in this case it is expected that a low relationship between the All American Child and VIC I1 be observed and this is in fact what is reported in Table Q8.4.

This factor may also serve to define the assertiveness factor in the following manner. A hostile child could easily be a manipulator. On the other hand, and assertive child may appear at times to be manipulating others and at other times the same behavior can be seen as protection against intrusion. Thus, if the interpretation of the assertive factor is that the high scorer is hostile/aggressive, then there should be a positive relationship between this score and the score on VIC I1. If the interpretation of the assertive factor is that the child is a robust resistor of intrusion, then there should be little or no relationship between these scores and the scores on the VIC II. An examination of Table Q8.4 indicates no relation between these scores so that the latter interpretation is more viable.

To summarize, there are two major meaning structures which lend coherance to the ratings which teachers apply to the children of this study. The first structure we have labelled the "All American Child". It is interpreted to refer to an outgoing, likable, active, persistent, and successful child. This is a stable variable (vector) describing a psychosocially mature child. Those receiving a high score in this variable are perceived by kindergarten teachers as very mature and those receiving a low score are perceived as less mature. The second meaning structure found in these ratings has been labelled an "Assertive" dimension.

In order to understand the meaning of the teacher judgments fully, it is important to examine all of the relationships these variables have with others in the study. There are two major sets of variables to which the teachers rating vectors should be related. One is the set of outcome variables, and the second is the set of family demographic characteristics used in the full analytic model as adjusting variables. The demographic variables will be discussed first.

Table Q8.5 presents the intercorrelation matrix of the two teacher vectors with the demograhic and academic variables. The "All American Child" vector does significantly relate with these variables in a positive direction. The higher the scores on mother's education, home stimulation, and per capita income, the higher the ratings on the All American Child measure. Table Q8.5 also indicates that there is no relationship between the assertiveness variables and these demographic measures.

Conclusions

There seem to be two rather separate dimensions of teacher ratings which are found in these data and which have quite different implications. On the one had the All American Child theme within teacher ratings indicates a relationship between socially desirable behaviors, academic achievement, and socioeconomic status in the eyes of teachers. This is not a new finding and it is one of significant educational value if in fact the casual relationships among these variables can be established. Unfortunately, there is no meaningful way of approaching this problem with the current data since all measures were taken once and at the same time. In order to establish causal relations in a case such as this, it is necessary that some kind of temporal separation between the variables can be established and that is not possible in the present case. Note that the usual interpretation of the casual relationship among these variables is that teacher expectations (which are based on an internalized, pre-existing stereotype of the academic capacities of upper and lower income children) contributes to both less desirable social behavior of the children of lower income families and lower academic achievement of these children. The notion that children will behave (and achieve) in accordance with the way in which their teachers expect them to achieve and behave is a popular one for which some evidence is generally available. In order to be educationally usefully, however, it must be shown how the alternative notion (that childrens' behaviors and achievement contribute to teachers' judgments, a process which must be true in some sense or else it would be impossible for us to expect that teachers could meaningfully assess childrens' performance) interacts with the notion that teachers' expectation causes childrens' behavior. Clearly both notions are likely to be true in some senses, and the educationally important knowledge is how the two interact. In addition, it is important to discover what has not yet been discovered, namely the means by which teachers communicate their expectations to children, so that we might be in a position to train teachers to avoid the pitfall of the self fulfilling prophecy. The present finding that SES of children, teachers judgments of the children, and childrens' academic achievement are all generally intercorrelated is another example of a most interesting problem in education, but one which cannot be solved in the present study.

The second theme however, has somewhat more potential for the future. The judgment that some children are more assertive than others, and that the only variable on the present data base associated with that judgment is whether the child attended Head Start or not are findings of some interest. The present data base is not fully capable of distinguishing between the assertiveness which Head Start children brought with then to Head Start and the assertiveness which they acquired from Head Start. However, it is impressive that the assertiveness scores are not related to the measures of SES (per capita income and mothers' education). These factors are related to academic achievement (Table Q8.6) If the Head Start children did bring assertiveness with them from home, it is quite surprising that it is unrelated to these SES indicators. Thus, it seems reasonable to assume that a good deal of the measured assertiveness which is found in the Head Start children (and not found in roughly comparable children who did not go to Head Start) should be attributable to the experiences acquired in Head Start.

If assertiveness is not related to the present measures of academic achievement in the beginning grade of public school, it is reasonable to consider what other value such a trait might have. One such value is suggested immediately by the nature of the definition of assertiveness as used in the present context. We have suggested that what the teachers' are judging is the tendency of the child to actively resist intrusion into his psychological space. Clearly, the negative expectations which teachers seem to have about children from the socioeconomic and ethnic groups from which the Head Start children come can be considered a negative intrusion. The generally intrusive nature of the social judgments which are placed upon children when they are segregated in school systems because of their ethnic and economic backgrounds is another eample of that which assertive children might be able to resist. We are, in other words, suggesting that if the Head Start children are learning assertiveness in Head Start, that they might also be acquiring the capacity to better resist the psychological damage which so often accompanies a hostile social and educational world.

The consequence of the acquisition of this capacity to resist some of the socially-based stresses of public school are difficult to predict, but they obviously do not include immediate academic gains. The effects of assertiveness can be expected to be slow and perhaps cumulative so that the effects ought not to be discernible until later on in the elementary grades. The effects might not be expected in the academic areas at all and they might not be observed in all children equally. For example, more assertive children might be able to resist the slow deterioration in and withdrawal from the school environment which characterizes the career of so many chidren from disadvantaged families. Thus, by the fifth or sixth grade, assertive Head Start children might be found in fewer numbers among the high at-risk children even though they might not be closing the gap between their academic achievement levels and norms for their grades. This means that the assertiveness could be expected to have effects disproportionately among the at-risk children and that the effects on them ought to be found in the indicators of risk. This is not inconsistent with recent findings that longitudinal effects of preschool for low income children can be found in reduced rates of retention in grade and assignment to special classes. These are precisely the kind of at-risk indicators which might be responsive to the degree of assertiveness (as defined in the present study) acquired in the preschool years.

There is, of course, no evidence for these broad speculations. However, it is reasonable to consider the findings on teacher ratings of Head Start children in this light. If support for such a notion can be found then some important implications for these findings are present.

TABLE Q8.1

PRINCIPAL COMPONENTS ANALYSIS RESULTS FOR AFFECTIVE CHILD OUTCOMES

(n=1305)

Factor	Loading	Eigen Value	Percent of Variance
Factor I: All American		4.07	40.7
Autonomous Achievement Striving (Beller)	.827		
Extroversion/Introversion[1] (Schaefer)	.784		
Task Orientation (Schaefer)	.782		
Popularity (Schaefer)[2]	-.753		
Child's Academic and Behavior Potential (Schaefer)	.778		
Adult Dependency Conflict (Schaefer)	-.632		
Factor II: Assertiveness		2.20	22.0
Child Dependency (Beller)	.840		
Adult Dependency (Beller)	.743		
Aggression (Beller)	.721		
Hostility/Tolerance[3] (Schaefer)	.669		

[1] The higher score indicates extroversion.

[2] The higher score indicates lack of popularity.

[3] The higher score indicates hostility.

TABLE Q8.2

Items on the Adult and Child Dependency Factors from the Beller Teacher Rating Scales

ADULT DEPENDENCY:

1. How often does the child seek help from the teacher and other adults?
2. How often does the child seek recognition from the teacher and other adults?
3. How often does the child seek physical contact with teacher and other adults?
4. How often does the child seek attention from teacher and other adults?
5. How often does the child seek to be near to others, teacher and other adults?

CHILD DEPENDENCY:

1. How often does the child seek help from other children?
2. How often does the child seek recognition from other children?
3. How often does the child seek physical contact from other children?
4. How often does the child seek attention from other children?
5. How often does the child seek to be near to other children?

TABLE Q8.3

PRINCIPAL COMPONENTS ANALYSIS RESULTS FOR VALUES INVENTORY FOR CHILDREN (n=1224)

Factor		Eigen Value	Percent of Variance
Factor I:		2.53	50.5
"Me First"	.911		
Sociability	.899		
Social Conformity	.850		
Factor II:		1.12	22.4
Social Behavior	.842		
Achievement Motivation	.703		

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TABLE Q8.4

CORRELATIONS OF TEACHER RATING FACTORS WITH CHILD RATING FACTORS

Child Ratings: / Teacher Ratings:	Head Start Only (n=443)		All Children (n=896)	
	VIC I	VIC II	VIC I	VIC II
All American	0.145**	0.073	0.118**	0.029
Assertiveness	0.029	-0.053	0.003	-0.009

* = $p \leq .05$

** = $p \leq .01$

TABLE Q8.5

CORRELATIONS OF TEACHER RATING FACTORS WITH DEMOGRAPHIC CHARACTERISTICS

Child Ratings / Teacher Ratings	Head Start Only (n)			All Children (n)		
	Mothers' Education	Home Stimulation	Per Cap. Income	Mothers' Education	Home Stimulation	Per Capita Income
All American	0.157** (477)	0.196** (477)	0.213** (490)	0.209** (933)	0.248** (949)	0.254** (966)
Assertiveness	0.039 (477)	0.002 (477)	0.026 (490)	-0.040 (933)	-0.053* (949)	-0.083** (966)

* = $p \leq .05$

** = $p \leq .01$

TABLE Q8.6

CORRELATIONS OF CHILD ACADEMIC OUTCOMES WITH TEACHER RATINGS

Child Outcomes	Teacher Ratings			
	All Children (n=1102)		Head Start Only (n=534)	
	All American	Assertive	All American	Assertive
Spell and Read Words	.152	-.089	.074	-.098
Name Letters	.211	-.048	.208	-.018
Copy Marks	.283	-.135	.302	-.147
Letter Recognition	.131	-.023	.160	.009
Written Math	.136	-.042	.055	-.061
Oral Math I (Easy)	.243	-.067	.263	-.027
Oral Math II (Difficult)	.266	-.081	.200	-.057
Counting Dots	.154	.017	.173	.044

Question 9: A Model of Interrelationships Among Predictors of Child Outcomes

In the original study, a series of outcome measures were analyzed as dependent upon such family background factors as mother's education, family income, and home stimulation variables. In addition, selected measures of parental attitudes and parent involvement were used as predictors. In the secondary analysis, these factors along with measures of Head Start activities are entered into a model of interrelationships to find the most effective set of causal paths to child outcomes. These analyses attempted to answer the following question:

> Is there a predominant set of interrelationships among SES factors, parent attitudes, home stimulation measures, parent involvement measures, and the Head Start activities which leads to heightened levels of child outcomes?

There is one set of interrelated factors which lead to small but important effects in a few of the child outcome measures. The set is composed of Head Start as a direct factor in child test performance (the major component of the set), plus Head Start as a contributor to the presence of academically stimulating events in the home which in turn contributes to the performance of the child on the outcome tests (the minor component of the set). These multiple routes of Head Start toward child performance worked in combination to produce small but important effects in a measure of visual-motor skill (copying marks), in two of the more difficult math subtests, and in the measure of assertiveness constructed for this study. In addition, some of these effects of such interrelated factors are associated with particular activity emphases in the Head Start center rather than with Head Start in general. The strongest of such activity emphasis effects in this model is found with the

Dramatic/Expressive Play emphases. Centers which emphasize Dramatic/Expressive Play show the highest impact on reading, spelling and assertiveness when these effects are analyzed as part of the causal model used in this study.

Technical Discussion

Consider the recursive model depicted in the causal diagram in Figure 9.1 and represented by the following set of structural equations:

$$X_1 = p_{12}X_2 + p_{13}X_3 + p_{14}X_4 + p_{15}X_5 + p_{16}X_6 + p_{1w}W$$

$$X_2 = p_{23}X_3 + p_{24}X_4 + p_{25}X_5 + p_{26}X_6 + p_{2u}U$$

$$X_3 = p_{34}X_4 + p_{35}X_5 + p_{36}X_6 + p_{3v}V$$

$$X_4 = p_{45}X_5 + p_{46}X_6 + p_{4t}T$$

It is assumed the random disturbances (T,U,V,W) are mutually uncorrelated and uncorrelated with the observed variable on the right-hand side of the structural equation in which they appear.

In this recursive model, the dependent variables (X_1) are the academic and affective factor scores used as child outcome measures. The exogenous variables are mother's educational attainment (MAED) and per capita income (PCI). Three variables were considered intervening between the outcome variable and the exogenous variables: Head Start experience (HSNOPRE = 1 if Head Start, = 0 if no preschool), parental attitude toward education as a means of upward mobility (HESSFS3), and an index of home stimulation (HOMESTM2). The Head Start experience was considered causally antecedent to parental attitudes toward education and the home stimulation index, while parental attitude toward education was considered antecedent to home stimulation. Only Blacks in the

Southeast were included in the analyses. This limited focus was adopted because it is necessary to consider such a model of causal relationships within regions rather than across regions and since the original analyses were focused on Black children, the present causal model adopted the same strategy. Listwise deletion was used in the least squares regressions so only those Blacks with valid information available for all variables entered into the model are included in the analyses. For the academic variables, 125 entered into the analyses, while 90 entered into the analyses for the affective measures.

In order to facilitate interpretations of specific paths within the model, systematic applications of ordinary least squares regressions were used to decompose the total effects of one variable on another into direct and indirect effects. Successive computation of reduced-form equations beginning with an equation containing only the exogenous variables then adding intervening variables in sequence from cause to effect generated the necessary information to decompose effects into their various direct and indirect portions.

Total effect of one variable on another is the sum of the direct and indirect effects. It indicates how much combined indirect and direct change in a consequent variable is induced by a unit shift in an antecedent variable. Indirect effects refer to that portion of the total effect which is transmitted or mediated by intervening variables in the model. In other words, indirect effects indicate how much change occurs in a consequent variable because the manipulation of an antecendent variable of interest leads to changes in an intervening variable which in turn leads to change in the consequent variable. Finally, the direct effect of one variable on another refers to the portion of the total effect which is not mediated by other variables, i.e., the effect which remains when the intervening variables are held constant.

The effects presented in Tables Q9.1, Q9.3, Q9.5 to Q9.7, are the standardized regression coefficients for the relevant paths. They can be interpreted as follows: for every unit change in a predictor variable or set of variables, the figure entered in the table indicates the amount of change induced in the dependent variable in standard deviation units of the dependent variable. For example, consider Table Q9.1, Dependent Variable (X_1), copying marks. The effects of the variable Head Start vs No Preschool (X_4), are presented in the row labeled Head Start vs No Preschool. The total effect of this variable on the copying marks outcome variable is .205 standard deviation units of the copying marks distribution. Thus, Head Start, overall influences a little more than a fifth of a standard deviation of copying marks. The extreme right hand column of this table records the direct effects of the Head Start variable, and in this case the figure is .181. This indicates that of the total .205 SD's which Head Start influences, the portion which is direct and unrelated to the influence Head Start has on any other variable is .181 SD's. The column labeled Indirect Effects Via (X_2), which is Home Stimulation, records the contribution of the predetermined predictor variable that results from the influence of Head Start on Home Stimulation. In this column, the appropriate figure in the present example is .023. This indicates that when the effect which Head Start has on Home Stimulation is assessed for its effect on copying marks, the amount of change induced in this outcome measure is .023 SD's. The total Head Start effect on copying marks is therefore, the sum of the direct effect (.181) and the indirect effect (.023). Note that in this case there are no other indirect effects associated with Head Start.

Tables Q9.1 to Q9.3 present the total effects, indirect effects, and direct effects of the several variables in the model on each of the dependent variables. These effects are generated through successive reduced-form regression equations. In addition, Table Q9.4 presents the simple Pearson correlation matrix of all predictor and exogenous variables with each other. There are several preliminary findings which need to be mentioned before the central findings are presented. First, it is clear that when the antecedents to enrollment in Head Start are examined in this model, only mother's education shows any relationship with this variable. Children who go to Head Start in this sample have mothers whose level of education tends to be below that of the mothers of children who did not attend preschool. There is no relationship between per capita income and enrollment. Both of these findings replicate previous findings in the secondary analysis.

Next, when the antecedents of parental attitudes are considered, only the per capita income relates to this variable. The lower the per capita income, the greater is the belief that education is a significant means to upward mobility. Head Start does not contribute any variance to this belief nor does mothers' education. It should be noted, however, that the magnitude of the change in parental attitudes associated with changes in per capita income is quite small, amounting to just .11 SD's. The soures of variance in these attitudes is not therefore strongly located in the present model.

Finally, the index of home stimulation (X_2) is, in the present sample, positively related to per capita income, attitudes toward education, and to whether or not the child was enrolled in Head Start. Thus, if the child was enrolled in Head Start there is an overall increment of .209 SD's in the Home Stimulation variable. In other words, Head Start produced about a fifth of a standard deviation of Home Stimulation change in its enrollees. The other sources of variance in Home Stimulation come from factors unrelated to the educational experiences of the child, viz., per capita income, and parental attitudes toward education. One of the goals of Head Start is to produce just such changes in the home atmosphere, and it is this portion of the variance of home stimulation factors which is attibutable to Head Start that we wish to examine for impact on children. The causal mechanism by which per capita income and parental attitudes influences the events in the home which are measured by the index used in the present study is not at all clear. It is also unclear (in the sense that there are few data on the present data base which can speak to the issue) how Head Start experience contributes to the change in the scores on Home Stimulation. The present analysis indicates that involvement in the center is moderately associated with variation in Home Stimulation (see below, Question 11). Other aspects of Head Start which might contribute to the change in home environment have not been measured in the present study so that a full causal analysis of home stimulation cannot be accomplished in this study.

Turning now to the consequences of the model on child outcomes, Tables Q9.1 to Q9.3, it should be noted that the indirect effects are generally very small. The large effects, i.e., those which account for an eighth or more of a standard deviation of change in any of the outcomes, are all direct effects of the SES and Head Start variables. These latter variables are, of course the most important for this study, but it is important to note that for the present sample, Head Start does not interact with any variable in the model except Home Stimulation to produce effects on child outcome measures.

There are four outcome variables which reflect the direct impact of Head Start attendance in this sample, and three of these effects are slightly affected by a Head Start influenced Home Stimulation increment. These three are: Copy Marks, Oral Math II and Assertive.

The fourth outcome measure which is influenced directly by Head Start and for which there are no indirect Head Start effects is Oral Math I.

In all four cases, the total Head Start effect fell within the .15-.20 SDs range. However, when these total effects are decomposed into direct and indirect, the indirect mediating variable (Home Stimulation) contributed small and consistent amounts to the child outcome measures. For copying marks, the direct effect of Head Start was .181 and the indirect effect via Home Stimulation was .023 for a total effect of .205 SDs. Thus, 88% of the total effect was a direct Head Start effects and 12% was an indirect effect. For Oral Math II, the total Head Start effect was .150, with 92% of that effect (.138 SDs) being a direct effect and 8% (.011) being indirect via Home Stimulation. The assertiveness outcome showed a total Head Start effect of .191 of which 93% was directly attributed to Head Start alone. Only Oral Math I showed a total effect (.15 SDs) 100% of which was a direct Head Start consequence.

The remaining effects that are displayed in Tables Q9.1 to Q9.3 have to do with the consequences of SES variables and the psychosocial variables included in the Home Stimulation and Parental Attitudes measures. Home Stimulation appears to be an active variable in this model since it often has a direct effect and rarely does it have an indirect effect, whereas several of the SES measures have indirect effects through Home Stimulation. This variable captures some of the important ways by which both SES variables and Head Start have an impact on child outcomes. These indirect effects are, in the present study, small, but they are seen often.

The two affective measures, All American Scale and Assertiveness Scale, are influenced in sharply different ways in this model as they were in the analyses presented in Question 7. The All American Scale is directly influenced by mothers education (.228 SD's) and per capita income (.138 SD's) with no evidence for any indirect effects. Public school teachers judge children to have higher scores on the All American Scale when their mothers have more education and the family has a higher per capita income than when the mothers have less education and the family income is lower. This effect is independent of the child's enrollment in Head Start.

On the other hand, the Assertive Scale is influenced by attendance in Head Start with no evidence for any indirect effects. That is, public school teachers rate Head Start children as higher on Assertiveness than non-Head Start children regardless of the family background of the children. This is a direct Head Start effect which is the same as that reported in Question 7 of the results section of this report.

The effects of Head Start reported above can be differentially distributed across types of Head Start programs. It is possible that Head Start centers emphasizing different kinds of activities may play different roles in the causal models under consideration here. In order to explore this issue, only Head Start children were selected and a somewhat different model developed. Here, the model includes the same SES, family background and parental attitude variables as those in the first model. However, because this analysis focuses on Head Start children alone, it is also possible to consider parent involvement at the Head Start center as a component of the model. The causal assumption is that Head Start centers differ in the kinds of activities in which they engage, that these activities contribute to the magnitude of parent involvement, that parent involvement is a mechanism by which home stimulation is changed, and that changes in home stimulation will contribute to changes in child outcome scores. This model is presented in Figure Q9.2.

Unfortunately, a number of the centers are missing data on activity emphases, and because a large number of children did not have center identifying codes it was necessary to use pairwise deletion to select the sample and to calculate the standardized path coefficients. In the pairwise calculation of the single order correlations, the number of observations ranged from 40 to 187 and the total number of degrees of freedom in the calculation of the path coefficients of the full model was 39. The results of these calculations are, therefore, quite unstable and should be treated with a great deal of caution. Indeed, using traditional standards of significance, only one or two effects can be identified. However, it seems reasonable to consider trends in these data, so that regression coefficients which are large enough to reach a $p<.10$ will be mentioned. For the same reason, none of the indirect effects will be reported since they are all so small that under the present circumstances they cannot be important components of a causal system.

Tables Q9.5 to Q9.7 present these findings. In respect to the Home Stimulation variable, there is one clear direct effect. For each unit increase in the social activities emphasis, there is an increase of .46 SD's in Home Stimulation. This is a much larger effect on Home Stimulation than that produced by parent involvement in the center on Home Stimulation. Although it is not clear how this important variable is influenced, it is likely that an exploration of the reasons for the contribution of the social activities emphasis to this variable would be a very productive task. This activity emphasis may carry a good deal of importance and this is borne out in its role in producing effects on the All American variable. Here, the direct effect of social activity emphasis on All American is .381 SD's.

The only activity emphasis which shows a direct effect on academic outcome is Dramatic/Expressive Play emphases which contributes to Spelling and Reading (.305 SD's). This activity is also strongly associated, in a direct way, with the production of change in the Assertiveness measure. Here a unit increment in Dramatic/Expressive Play is associated with .374 SD's in the Assertiveness Scale. There are no other findings which can be reported from the examination of this model under the present sample size.

Conclusions

The exploration of effects of complex sets of interrelationships requires a large data base with substantial N's. Future work in this area needs to keep this in mind when planning designs and sampling procedures. In the light of these constraints, caution in the interpretation of the present findings is extremely important.

In general, there does not appear to be strong evidence for the kind of psychologic which underlies the models presented in this report. The largest portion of effects observable are direct effects of Head Start and SES variables. The indirect effects are not very frequent, and are quite small. There does seem to be a good deal of potential in the Home Stimulation variable, and it is clear that a small portion of the variance of this variable is attributable to Head Start. This Head Start-related variance is very weakly related to child outcomes and it is this weakness that prompts the assertion that the psychologic of the model is not well established. However, this must be modified by the assertion that has been made in several places in this report, that the measures of child outcomes are not at all to be considered as totally appropriate to the anticipated outcomes of Head Start. This together with the constraints mentioned above suggest that the weak relationships among the factors in the causal model are underestimates of the true state of affairs. The two relationships on greatest interest here are those involving the centers emphasizing social development activities and centers emphasizing expressive/dramatic play. In the former case, there seems to be a trend in the data suggesting that there is a potentially causal relationship between the emphasis on social activities and the magnitude of home stimulation scores for participating families. In the latter case there appears to be evidence that expressive/dramatic play contributes to the emergence of high assertiveness scores for participating children. If these trends can be verified they represent significant additions to the knowledge base of Head Start. But it must be noted how tenuous these trends are in the present data base.

The conclusion which seems to be the most appropriate to draw is not that the models are wrong, but that they have not been tested properly. It is impressive that the three activity factors developed in this study carry somewhat different roles in the sequences which produce change in children. Accordingly, it is extremely unfortunate that the application of these curriculum measures has been accomplished with such a large degree of error. This point, developed in Question 1, cannot be understated. There is no way of knowing whether the few children selected from each center did, in fact, receive the curriculum treatment in the way and to the extent to which the present scoring system explicitly assumes. The fact that the activity emphases do appear to function differently in the causal models presented here suggests that their impact is far greater than the present measuring procedure can reveal.

Much the same can be said for the measurement of the Home Stimulation variable. Despite a weak definition of a stimulating environment (i.e., a count of the number of materials and children's books in the home and the number of times a parent becomes involved with the child on academic matters), and a weak method of data collection (parental self-report), the Home Stimulation variable appears to have a great deal of potential in accounting for child outcomes. The fact that this variable has just a few tenuous links to Head Start despite a stenuous effort to systematically influence the home environment by Head Start workers suggests that the measurement issue is a prime problem which must be resolved before the subtleties of a causal model can be managed.

The major thrust of these comments is that a complex model requires data which are at the same level of complexity and subtlety. The task of finding evidence to support or deny a model of interrelationships among variables related to social and intellectual growth in children cannot be accomplished by measuring surrogates of the critical variables at long distances from their locales. Thus, if it is necessary to know how a curriculum contributes to parent involvement and how that in turn contributes to the home environment, it is necessary to be in the center and observe how the curriculum is experienced by each subject in the sample. It is necessary to understand exactly how and why a parent relates to the center in the way he/she does. It is necessary to be in the home to measure the intellectual as well as the affective environment of that home. Large scale studies involving many subjects scattered across the nation cannot be used to answer question for which in-depth data in very large amounts are required from each subject.

TABLE Q9.1

INTERPRETATION OF EFFECTS IN A MODEL OF READING CHILD OUTCOMES

DEPENDENT VARIABLE	PREDETERMINED VARIABLE	TOTAL EFFECT	INDIRECT EFFECTS VIA			DIRECT EFFECT
			X_4	X_3	X_2	
HSNOPRE (X_4)	MAED (X_5)	-.103	--	--	--	-.103
	PCI (X_6)	.018	--	--	--	.018
HESSFS3 (X_3)	HSNOPRE (X_4)	-.002	--	--	--	-.002
	MAED (X_5)	.095	.001	--	--	.094
	PCI (X_6)	-.111	.000	--	--	-.111
HOMESTM2 (X_2)	HESSFS3 (X_3)	.220	--	--	--	.220
	HSNOPRE (X_4)	.209	--	.000	--	.209
	MAED (X_5)	.087	-.022	.021	--	.086
	PCI (X_6)	.181	.004	-.024	--	.201
Spell and Read Words	HOMESTM2 (X_2)	.086	--	--	--	.086
	HESSFS3 (X_3)	-.048	--	--	.019	-.067
	HSNOPRE (X_4)	.034	--	.000	.018	.016
	MAED (X_5)	.011	-.004	-.004	.008	-.012
	PCI (X_6)	.094	.001	.005	.017	.071
Name Letters	HOMESTM2 (X_2)	.063	--	--	--	.063
	HESSFS3 (X_3)	-.048	--	--	.014	-.063
	HSNOPRE (X_4)	.072	--	.000	.013	.059
	MAED (X_5)	-.110	-.007	-.007	.006	-.103
	PCI (X_6)	.315	-.004	.006	.013	.300
Copy Marks	HOMESTM2 (X_2)	.111	--	--	--	.111
	HESSFS3 (X_3)	.001	--	--	.024	-.023
	HSNOPRE (X_4)	.205	--	.000	.023	.181
	MAED (X_5)	-.171	-.021	.000	.010	-.160
	PCI (X_6)	.082	.004	.000	.022	.056
Letter Recognition	HOMESTM2 (X_2)	-.137	--	--	--	-.137
	HESSFS3 (X_3)	.038	--	--	-.030	.068
	HSNOPRE (X_4)	-.068	--	.000	-.029	-.039
	MAED (X_5)	.232	.007	.004	-.012	.233
	PCI (X_6)	-.276	-.001	-.004	-.028	-.243

TABLE Q9.2

INTERPRETATIONS OF EFFECTS IN A MODEL OF MATH CHILD OUTCOMES

DEPENDENT VARIABLE	PREDETERMINED VARIABLE	TOTAL EFFECT	INDIRECT EFFECTS VIA			DIRECT EFFECT
			X_4	X_3	X_2	
HSNOPRE (X_4)	MAED (X_5)	-.103	--	--	--	-.103
	PCI (X_6)	.018	--	--	--	.018
HESSFS3 (X_3)	HSNOPRE (X_4)	-.002	--	--	--	-.002
	MAED (X_5)	.095	.001	--	--	.094
	PCI (X_6)	-.111	.000	--	--	-.111
HOMESTM2 (X_2)	HESSFS3 (X_3)	.220	--	--	--	.220
	HSNOPRE (X_4)	.209	--	.000	--	.209
	MAED (X_5)	.087	-.022	.021	--	.086
	PCI (X_6)	.181	.004	-.024	--	.201
Written Math	HOMESTM2 (X_2)	.183	--	--	--	.183
	HESSFS3 (X_3)	-.050	--	--	.040	-.091
	HSNOPRE (X_4)	.018	--	.000	.038	-.020
	MAED (X_5)	-.107	-.006	-.005	.016	-.116
	PCI (X_6)	.196	.000	.006	.037	.154
Oral Math I (Easy)	HOMESTM2 (X_2)	-.009	--	--	--	-.009
	HESSFS3 (X_3)	-.012	--	--	-.002	-.010
	HSNOPRE (X_4)	.152	--	.000	-.002	.154
	MAED (X_5)	-.060	-.016	-.001	-.001	-.043
	PCI (X_6)	.182	.002	.001	.003	.180
Oral Math II (Difficult)	HOMESTM2 (X_2)	.055	--	--	--	.055
	HESSFS3 (X_3)	.017	--	--	.012	.005
	HSNOPRE (X_4)	.150	--	.000	.011	.138
	MAED (X_5)	.026	-.015	.001	.005	.035
	PCI (X_6)	.127	.003	.002	.011	.115
Counting Dots	HOMESTM2 (X_2)	-.094	--	--	--	.094
	HESSFS3 (X_3)	.043	--	--	-.021	.064
	HSNOPRE (X_4)	.017	--	.000	-.020	.037
	MAED (X_5)	-.117	-.002	.004	-.008	-.111
	PCI (X_6)	-.039	.000	-.005	-.019	-.015

TABLE Q9.3

INTERPRETATIONS OF EFFECTS IN A MODEL OF AFFECTIVE CHILD OUTCOMES

DEPENDENT VARIABLE	PREDETERMINED VARIABLE	TOTAL EFFECT	INDIRECT EFFECTS VIA			DIRECT EFFECT
			X_4	X_3	X_2	
HSNOPRE (X_4)	MAED (X_5)	-.098	--	--	--	-.098
	PCI (X_6)	-.044	--	--	--	-.044
HESSFS3 (X_3)	HSNOPRE (X_4)	.031	--	--	--	.031
	MAED (X_5)	.069	-.003	--	--	.072
	PCI (X_6)	.005	-.001	--	--	.006
HOMESTM2 (X_2)	HESSFS3 (X_3)	.267	--	--	--	.267
	HSNOPRE (X_4)	.228	--	.008	--	.220
	MAED (X_5)	.024	-.022	.019	--	.027
	PCI (X_6)	.238	-.010	.002	--	.246
All American	HOMESTM2 (X_2)	-.054	--	--	--	-.054
	HESSFS3 (X_3)	.116	--	--	-.014	.130
	HSNOPRE (X_4)	.011	--	.003	-.012	.020
	MAED (X_5)	.233	-.001	.008	-.002	.228
	PCI (X_6)	.124	-.001	.001	-.013	.138
Assertive	HOMESTM2 (X_2)	-.072	--	--	--	-.072
	HESSFS3 (X_3)	.128	--	--	-.019	.147
	HSNOPRE (X_4)	.191	--	.004	-.016	.203
	MAED (X_5)	.047	-.019	.009	-.002	.059
	PCI (X_6)	-.028	-.008	.001	-.018	-.003

TABLE Q9.4

CORRELATIONS BETWEEN ANTECEDENT VARIABLES

IPERCAP	0.3483 (187)						
ACTFACT1	0.0804 (68)	0.1122 (69)					
ACTFACT3	0.0706 (68)	0.0737 (69)	0.3421 (69)				
ACTFACT2	-0.0111 (68)	-0.1550 (69)	-0.6558 (69)	-0.0548 (69)			
HOMESTM2	0.2635 (180)	0.2321 (181)	-0.1689 (67)	-0.1740 (67)	0.3213 (67)		
HESSFS3	0.0198 (114)	-0.0489 (114)	-0.2159 (40)	-0.0414 (40)	0.1564 (40)	0.2703 (109)	
P1323201	0.1293 (183)	0.0905 (183)	-0.0124 (68)	-0.0276 (68)	-0.0033 (68)	0.1980 (176)	0.2182 (112)

TABLE Q9.5

INTERPRETATIONS OF ANTECEDENT EFFECTS IN A MODEL OF ACADEMIC AND AFFECTIVE CHILD OUTCOMES

DEPENDENT VARIABLE	PREDETERMINED VARIABLE	TOTAL EFFECT	INDIRECT EFFECTS VIA				DIRECT EFFECT
			X_4	X_3	X_2	COMBINED	
HESSFS3 (X_4)	ACTFACT2 (X_9)	.006	----	----	----	----	.006
	ACTFACT3 (X_8)	.035	----	----	----	----	.035
	ACTFACT1 (X_7)	-.223	----	----	----	----	.035
	PCI (X_6)	-.043	----	----	----	----	-.043
	MAED (X_5)	.050	----	----	----	----	.050
Parent Involvement (X_3)	ACTFACT2 (X_9)	-.012	.001	----	----	----	-.013
	ACTFACT3 (X_8)	-.032	.008	----	----	----	-.040
	ACTFACT1 (X_7)	-.024	-.050	----	----	----	.026
	PCI (X_6)	.054	-.010	----	----	----	.064
	MAED (X_5)	.114	.011	----	----	----	.103
	HESSFS3 (X_4)	.225	----	----	----	----	.225
HOMESTM2 (X_2)	ACTFACT2 (X_9)	.460	.001	-.001	----	----	.460
	ACTFACT3 (X_8)	-.238	.008	-.004	----	.001	-.243
	ACTFACT1 (X_7)	.173	-.050	.003	----	-.005	.225
	PCI (X_6)	.236	-.010	.007	----	-.001	.240
	MAED (X_5)	.189	.011	.011	----	.001	.166
	HESSFS3 (X_4)	.246	----	.023	----	----	.223
	Parent Inv (X_3)	.104	----	----	----	----	.104

TABLE Q9.6

INTERPRETATIONS OF EFFECTS IN A MODEL OF READING CHILD OUTCOMES

DEPENDENT VARIABLE	PREDETERMINED VARIABLE	TOTAL EFFECT	INDIRECT EFFECTS VIA				DIRECT EFFECT
			X_4	X_3	X_2	COMBINED	
Spell and Read Words	ACTFACT2 (X_9)	.005	-.001	.001	.150	.000	-.145
	ACTFACT3 (X_8)	.224	-.004	.002	-.079	.000	.305
	ACTFACT1 (X_7)	.030	.027	-.001	.073	-.015	-.054
	PCI (X_6)	.032	.005	-.003	.078	-.001	-.047
	MAED (X_5)	.123	-.006	-.005	.054	.007	.073
	HESSFS3 (X_4)	-.051	----	-.010	.072	.008	-.121
	Parent Inv (X_3)	-.010	----	----	.034	----	-.044
	HOMESTM2 (X_2)	.235	----	----	----	----	.235
Name Letters	ACTFACT2 (X_9)	-.056	-.000	.000	-.013	.000	-.043
	ACTFACT3 (X_8)	-.113	-.001	.001	.007	-.002	-.118
	ACTFACT1 (X_7)	-.065	.011	-.000	-.007	.003	-.072
	PCI (X_6)	.226	.002	-.001	-.007	.000	.232
	MAED (X_5)	.008	-.002	-.002	-.005	.000	.017
	HESSFS3 (X_4)	-.059	----	-.003	-.006	-.002	-.048
	Parent Inv (X_3)	-.018	----	----	-.003	----	-.015
	HOMESTM2 (X_2)	-.029	----	----	----	----	-.029
Copy Marks	ACTFACT2 (X_9)	.266	-.000	.000	.057	.001	.208
	ACTFACT3 (X_8)	-.138	-.002	.001	-.030	.000	-.107
	ACTFACT1 (X_7)	.195	.012	-.001	.028	-.004	.160
	PCI (X_6)	.121	.002	-.002	.030	.000	.091
	MAED (X_5)	-.119	-.003	-.004	.021	.003	-.136
	HESSFS3 (X_4)	-.033	----	-.008	.028	.003	-.056
	Parent Inv (X_3)	-.022	----	----	.013	----	-.035
	HOMESTM2 (X_2)	.124	----	----	----	----	.124
Letter Recognition	ACTFACT2 (X_9)	-.312	.000	.001	-.034	.000	-.279
	ACTFACT3 (X_8)	-.046	.003	.003	.018	-.001	-.069
	ACTFACT1 (X_7)	-.267	-.018	-.002	-.017	.008	-.238
	PCI (X_6)	-.257	-.003	-.005	-.018	.000	-.231
	MAED (X_5)	.220	.004	-.009	-.012	-.003	.240
	HESSFS3 (X_4)	.041	----	-.019	-.017	-.002	.079
	Parent Inv (X_3)	-.092	----	----	-.008	----	-.084
	HOMESTM2 (X_2)	-.075	----	----	----	----	-.075

TABLE Q9.7

INTERPRETATIONS OF EFFECTS IN A MODEL OF MATH CHILD OUTCOMES

DEPENDENT VARIABLE	PREDETERMINED VARIABLE	TOTAL EFFECT	INDIRECT EFFECTS VIA				DIRECT EFFECT
			X_4	X_3	X_2		
Written Math	ACTFACT2 (X_9)	.235	-.001	.000	.051	.000	.185
	ACTFACT3 (X_8)	.003	-.003	.000	-.027	.001	.032
	ACTFACT1 (X_7)	.109	.019	-.000	.025	-.005	.070
	PCI (X_6)	.127	.004	-.001	.027	.097	.098
	MAED (X_5)	.009	-.004	-.001	.018	.002	-.006
	HESSFS3 (X_4)	-.058	----	-.002	.025	.003	-.084
	Parent Inv (X_3)	.002	----	----	.012	----	-.010
	HOMESTM2 (X_2)	.111	----	----	----	----	.111
Oral Math I (Easy)	ACTFACT2 (X_9)	.116	-.001	-.000	-.023	.000	.140
	ACTFACT3 (X_8)	-.170	-.003	-.001	.012	.000	-.178
	ACTFACT1 (X_7)	.092	.020	.001	-.001	.001	.081
	PCI (X_6)	.015	.004	.002	-.012	.000	.021
	MAED (X_5)	.026	-.005	.003	-.008	-.001	.037
	HESSFS3 (X_4)	-.095	----	.007	-.011	.000	-.091
	Parent Inv (X_3)	.028	----	----	-.005	----	.033
	HOMESTM2 (X_2)	-.050	----	----	----	----	-.050
Oral Math II (Difficult)	ACTFACT2 (X_9)	-.051	.000	.001	.075	.001	-.128
	ACTFACT3 (X_8)	.197	-.000	.004	-.040	-.001	.234
	ACTFACT1 (X_7)	-.133	.000	-.002	.037	-.004	-.164
	PCI (X_6)	.186	.000	-.006	.040	.000	.152
	MAED (X_5)	-.001	.000	-.009	.027	.003	-.022
	HESSFS3 (X_4)	.018	----	-.020	.037	.003	-.002
	Parent Inv (X_3)	-.072	----	----	.017	----	-.089
	HOMESTM2 (X_2)	.164	----	----	----	----	.164
Counting Dots	ACTFACT2 (X_9)	-.059	.000	.001	.004	.000	-.064
	ACTFACT3 (X_8)	-.002	.003	.004	-.002	-.001	-.006
	ACTFACT1 (X_7)	.189	-.019	-.003	.002	.006	.203
	PCI (X_6)	.053	-.004	-.007	.002	.002	.060
	MAED (X_5)	-.038	.004	-.011	.001	.000	-.032
	HESSFS3 (X_4)	.062	----	-.023	.002	.000	.083
	Parent Inv (X_3)	-.101	----	----	.001	----	-.102
	HOMESTM2 (X_2)	.008	----	----	----	----	.008

TABLE Q9.8

INTERPRETATIONS OF EFFECTS IN A MODEL OF AFFECTIVE CHILD OUTCOMES

DEPENDENT VARIABLE	PREDETERMINED VARIABLE	TOTAL EFFECT	INDIRECT EFFECT VIA				DIRECT EFFECT
			X_4	X_3	X_2	COMBINED	
All American	ACTFACT2 (X_9)	.363	.001	.001	-.020	.000	.381
	ACTFACT3 (X_8)	.211	.005	.002	.010	.000	.194
	ACTFACT1 (X_7)	.081	-.033	-.001	-.010	.005	.120
	PCI (X_6)	.197	-.006	-.004	-.010	.000	.217
	MAED (X_5)	.166	.007	-.006	-.007	-.001	.173
	HESSFS3 (X_4)	.123	----	-.013	-.010	-.001	.147
	Parent Inv (X_3)	-.062	----	----	-.004	----	-.057
	HOMESTM2 (X_2)	-.043	----	----	----	----	-.043
Assertive	ACTFACT2 (X_9)	-.158	.001	-.002	.084	.000	-.241
	ACTFACT3 (X_8)	.331	.004	-.005	-.044	.002	.374
	ACTFACT1 (X_7)	-.020	-.024	.003	.041	-.016	-.024
	PCI (X_6)	-.018	-.005	.008	.044	-.003	-.062
	MAED (X_5)	.032	.005	.012	.030	.007	-.022
	HESSFS3 (X_4)	.180	----	.027	.041	.003	.109
	Parent Inv (X_3)	.138	----	----	.019	----	.119
	HOMESTM2 (X_2)	.182	----	----	----	----	.182

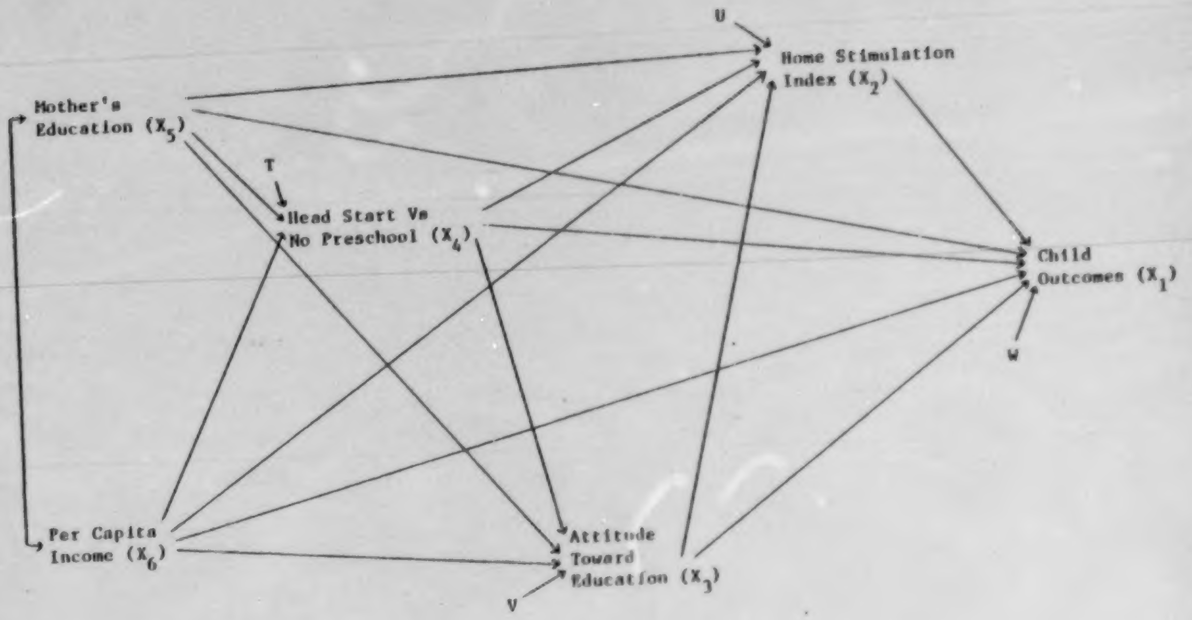
U
Home Stimulation Index (X_2)
Mother's Education (X_5)
T
Head Start Vs No Preschool (X_4)
Child Outcomes (X_1)
W
Per Capita Income (X_6)
Attitude Toward Education (X_3)
V

Fig. 9.1 Causal Diagram for Recursive Model

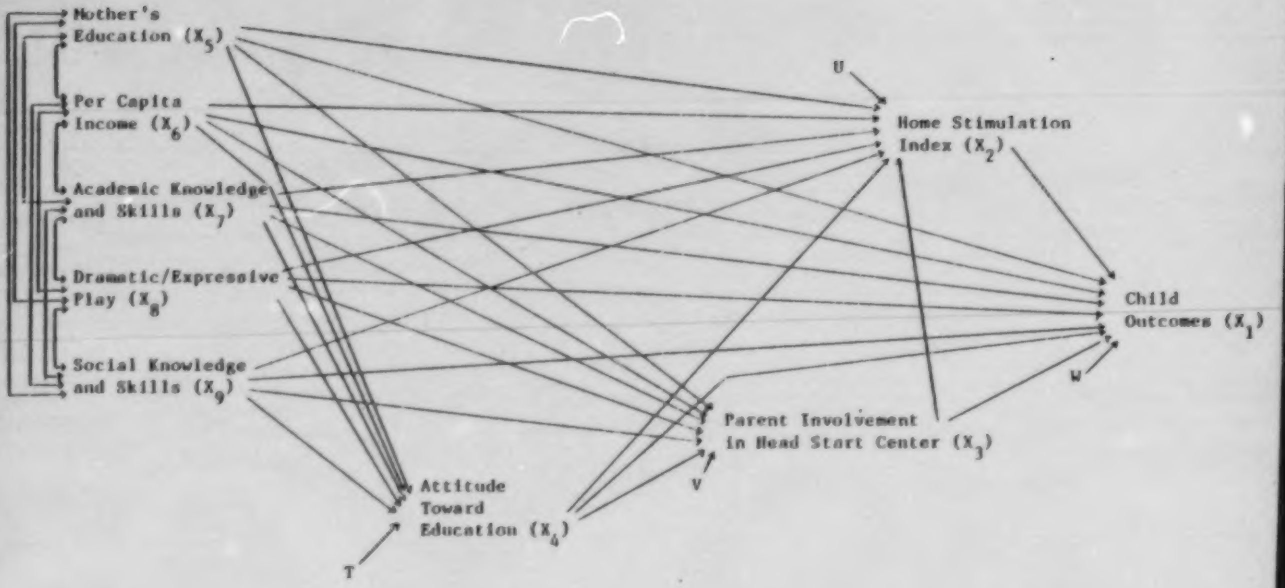
Mother's Education (X_5)
Per Capita Income (X_6)
Academic Knowledge and Skills (X_7)
Dramatic/Expressive Play (X_8)
Social Knowledge and Skills (X_9)
U
Home Stimulation Index (X_2)
Child Outcomes (X_1)
W
Parent Involvement in Head Start Center (X_3)
V
Attitude Toward Education (X_4)
T

Fig. 9.2 Causal Diagram for Recursive Model

Question 10: Characteristics of High Income Head Start Families

In the original study, it was found that the national sample contained a larger proportion of higher income families than was expected. The focus of this analysis is to describe their characteristics and determine the circumstances under which these families are participating in Head Start Programs. Income for this study is viewed in three ways: household income, eligibility, and per capita income. Eligibility was determined by Office of Child Development family income guidelines for 1977. Using household income and family size, these guidelines were matched as closely as possible given the constraints of the categories of household income, to determine if the family was above or below the poverty (eligibility) level.

Are high income Head Start families located in any particular region or community type?

Yes. In terms of household income greater than $10,000, proportionally more families live in the southeast and Northeast. The northeast and southwest have a higher proportion of families exceeding local elibility standards. A higher proportion of the highest categories of per capita income (over $2099) are represented in the Northeast, Southwest and West. The Southeast appears to be more in line with federal guidelines than the Northeast or Southwest.

Except in terms of eligibility, where proportionally more of the ineligibles live in rural communities, there are no community differences attributable to income.

Under what type of program sponsorship are the centers attended by these higher income families?

Consistently across income measures, within the higher household incomes, ineligibility category, and higher per capita incomes, there are proportionally more Head Start families associated with centers sponsored by Community Action Agencies than centers operating under other auspices.

What are the background and demographic characteristics of these families?

Regardless of the income measure, families with higher incomes tend to have mothers educated to a greater degree, to have a greater incidence of both parents working, and to be White to a greater extent than lower income families. Variation in family size is not related to household income, but families with higher per capita incomes and families whose incomes exceed the local eligibility requirements tend to have fewer family members.

What patterns of parent involvement are found among the higher income families?

There is no apparent relationship between income and the number of times a parent met with other parents, the frequency of assisting at the Head Start Center, or the number of times a parent talked with their child's teacher.

What are the parental attitudes toward school? What are parents' educational expectations for their children?

Some parental attitudes, are related to income. In terms of household income and eligibility, lower income (less than $10,000) families and eligible families expressed a more negative attitude toward public schools, and believe more strongly that education is a means for upward mobility than higher income and ineligible families.

However, parents from households with higher incomes tend to have higher expectations and aspirations for their children than parents from households having lower incomes.

Technical Discussion

Since most participation in Head Start is designated for the economically disadvantaged, of interest are differences in Head Start families which are related to income. There are three measures relative to income utilized in this portion of the study, household income, eligibility for Head Start, and per capita income. Differences with respect to locality, auspices, family background charcteristics, parent involvement or parental attitudes toward school must be examined in respect to all three income measures.

Household Income. There are 615 families in the Head Start only category who have household income data. Of these families 84% have household income of less than $10,000. Approximately one-third of the lower income families live in the Southeast and 30.8% live in the Northeast. The remainder are divided between the West and Southwest, 19.1% and 16.6%, respectively. The higher income families are dispersed differently over regions. The Northeast contains the greatest proportion of the higher income families (39.6%), the Southeast the smallest (12.9%). As with the lower income families, the West and Southwest have comparable proportions (21.8% and 25.7%, respectively), however for the higher income families this proportion is greater than for lower income families (Table Q10.2).

The distribution of community types for lower income families is similar to that of higher income families.

There are slightly more local CAA's represented in the higher income families than the lower income families (74.1% versus (63.5%).

Of the families having less than $10,000 in income, approximately half (51.1%) are represented by mothers who hae below high school education. Relatively few (8.6%) of these lower income families have mothers with above high school education. Those families having at least a $10,000 a year income are represented by proportionally fewer (20.6%) number of mothers with less than a high school education and by proportionally greater (57.7%) number of mothers with more than a high school education. Of the less than $10,000 income families 40.3% have mothers who completed high school, compared to 57.7% of the families with at least a $10,000 a year income. (Table Q10.3)

Differences between lower and higher household incomes are in part attributable to the number of adults working in the household. Of those families having at least $10,000 income, 52.7% are families in which both parents work. This contrasts to 27.35 of the lower income families with both parents working. at the other extreme, 38.25 of the lower income families versus 4.3% of the higher income families have no one in the household contributing to income. (Table Q10.4)

For the lower income Head start families (having both household and ethnicity data) a slightly higher proportion (59.1%) are Black versus (40.9%) White families. For the higher income families the proportional differences are greater, one-third are Black versus two-thirds being White.

The distribution of family size is relatively consistent for both the lower and higher income families. However, there is a slightly greater proportion (30%) of the higher income group having 4 members compared to 21.1% of the lower income group.

As with family size, there are no overt distributional differences of number of siblings for those families having lower incomes versus those families making at least $10.000 a year.

Three indicators of parent involvement were included in this portion of the analysis. The distribution of number of times parents were involved in activities with other parents did not significantly change for the lower and higher income families. Distributions of number of times the parent helped at the Head Start Center altered slightly though not significantly for lower and higher income families. The remaining measure of parent involvement, number of times parent talked with techer, was not distributionally different for lower and higher income families.

Consistently, lower income families had higher mean HESS factor scores than higher income families. That is, lower income families expressed a greater amount of school negativism, and to a greater extent believed that education is a means for upward mobility than higher income families. Also, the lower income families tend to perceive a positive value to education. However, when comparing mean HESS factor scores for Head Start families having various degrees of household incomes greater than $10,000 and for families with less than $10,000, some higher income families have greater mean scores on three of the five HESS factors than do the lower income families. (Table Q10.5) Parents living in households having $12,000 to $15,000 incomes report a higher value to education; parents in household having at least $12,000 or more income, representing two of the three higher income categories, have a more positive perception of teachers than do parents with lower incomes.

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A parent's perception of how well his/her child will do in school is not related to the income of the family. However, high income parents indicated to a greater extent than low income parents that their child will complete a vocational or two-year college, or a four-year college. Also, with respect to ability and performance components, of the higher income parents, a slightly greater proportion perceive their child as having more than average general ability and above average performance capabilities. In a similar trend, regardless of their child's acheivement level, proportionally more parents in the higher income than in the lower income category expect their child to attend a vocational or two-year college.

There are some regional differences attributed to household income. However, higher and lower income Head Start families are equally represented by type of community. With respect to auspices, the higher income families are found to a slightly greater degree, in local CAA's sponsored centers than are the lower income families.

Comparing mother's education of those families having less than $10,000 with those families having at least $10,000, we found reversals at the extremes of mother's education. Proportionally more lower income families (51.1% vs. 20.6%) have mothers with below high school education and proportionally more higher income families (21.6% vs. 8.6%) have mothers with above high school education. As expected, higher income families are represented by two working adults. With respect to ethnicity of families and household income, twice as many White as Black families have household incomes of at least $10,000. Ethnic breakdowns are not as pronounced for the lower income families; there 59.1% are Black and 40.9% are White. There are only slight differences in the distributions of family size and number of siblings for both lower and higher income families.

There are not apparent differences in any of the three indicators of parent involvement utilized in this part of the study and household income. Although lower income families indicate feelings of negativism toward school, they also perceive school as a means for upward mobility, and believe in the positive value of education. Generally, higher income parents have higher educational expectations for their children than do lower income parents.

There are 586 children whose preschool experience consisted of only Head Start and who have sufficient data to determine eligibility for Head Start. This eligibility is based upon poverty levels for famiy sizes within specific community types. Of these Head Start children, 64.7% were eligible and 35.3% were ineligible for participation.

Of those Head Start families who are eligible, about half (52.1%) live in the South, 37.3% live in the Southeast and 14.8% live in the Southwest. This contrasts to the regional breakdowns of the ineligibles in that although 41.6% live in the South, 17.9% live in the Southeast and 23.7% live in the Southwest. The highest proportion of ineligibles live in the Northeast (36.2%). (Table Q10.6)

There are proportionally more children from medium sized cities who are eligible than who are ineligible. Also, proportionally more ineligible families are found in rural communities.

Although local CAA's constitute the majority of both the eligibility categories, proportionally fewer eligible children (59.8%) were associated with Head Start centers under the auspices of a local CAA than were ineligible children (71.9%).

The eligible students have mothers with less education than ineligible students. Over two-thirds (71.5%) of the ineligible children's mothers have at least a high school diploma. This contrasts to 43.5% of the eligible children's mothers. There are more families with no one working among the eligible families than among the uneligible, as expected. The ineligible children resided in homes in which either both parents work (47.8%) or the father works and the mother does not work (41.4%). There is a greater proportion of Blacks than Whites in the eligible group and a greater proportion of Whites than Blacks in the ineligible group. The elibible families range from small to very large. The majority of ineligible families have 3 to 6 members. That is, 86.9% of the ineligibles are families of size ranging from 3 to 6; 63.1% of the eligibles are families in the same size range.

Two of the three indicators of parent involvement differ with respect to eligibility. A higher proportion of the eligible parents did not help at the center (36.0% versus 23.3%). In addition, the eligible parents tended to have less contact with Head Start teachers than the ineligible parents.

With respect to the attitudes toward education and public schools that were measured in this study, eligible and ineligible parents showed some meaningful differences. The eligible children's parents expressed more school negativism, placed a higher value upon education, and viewed education as a means for upward mobility than did the ineligibles. There was no difference in the degree of positive perception of teachers among parents above or below local eligibility criteria.

Some measures of parental expectations and eligibility are related. The ineligible parents tend to have greater expectations for their children, not in terms of ability (how well the child will do in school). Slightly more ineligible parents perceive their child as having more ability and above average performance capabilities; whereas, slightly more of the eligible parents view their children as having average ability with above average performance capabilities. The majority of both eligible (70.0%) and ineligible (60.6%) parents have aspirations for their children that are consistent with their perceived achievement capabilities of their children. Since a higher proportion of ineligible parents expect their child to attend either a two-year college or a vocational school, it is not unusual to find that regardless of achievement performance, post high school education is expected of children from ineligible homes.

Per capita Income. To account for the influence of family size on household income, per capita income was computed for all families having sufficient data. Per capita income is divided into six categories: (1) less than $600, (2) $600 to $999, (3) $1000 to $1499, (5) $1500 to $2099, (5) $2100 to $2999, and (6) $3000 or more. There is a higher proportion of Head Start families in the first three categories than in the last three, 69% versus 31%. Of the 613 Head start families having per capita data, the Southeast has proportionally more economically deprived families. (Table Q10.7) There is no significant relationship between community type and per capita income. Among lower, less than $1000, per capita families, there are proportionally fewer enrolled in CAA sponsored centers than in the higher categories. The lower categories of per capita income have proportionally more mothers lacking a high school degree. As with households with higher incomes, households having relatively high per capita incomes, at least $2100, also have both parents working. Predictably, in the lower per capita households, the probability of no one working increases.

There are proportionally more Black families having per capita income less than $1000, than there are White families. (Table Q10.8) White and Black families are equally represented in the $1000 to $1499 per capita income category. There is a disproportionate number of White families having per capita incomes of at least $1500 or higher.

There is no significant relationship between indicators of parent involvement and per capita income. The number of times a parent met with other parents, the frequency of assisting at the Head Start center, and the number of times a parent talked with their child's teacher is not dependent upon a family's per capita income.

The remaining attitude and expectation measures show the same relationship between these scores and per capita income as reported earlier for total household income and attitudes. Generally, per capita income and total household income follow the same pattern.

TABLE Q10.1

Federal Guidelines for Various Sized Urban and Rural Families to Participate in Head Start

Number of Children	Urban Income Limit[1]	Rural Income Limit
2	3200	4200
3	3800	5000
4	5000	6200
5	5700	6800
6	6800	7700
7	7400	8700
8	8200	9800
9	9200	12,000
10	9800	12,000
11	12,000	12,000
12 or greater		15,000

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[1] To be eligible as family's income must be less than the specified limit.

TABLE Q10.2. Crosstabulation of Household Income by Region for Head Start Families

	Region				
	Northeast n (%)	Southeast n (%)	Southwest n (%)	West n (%)	TOTAL n (%)
Household Income					
Less than $10,000	158 (30.8)	172 (33.5)	85 (16.6)	98 (19.1)	513 (83.6)
$10,000 to $11,999	17 (44.7)	5 (13.2)	9 (23.7)	7 (18.4)	38 (6.2)
$12,000 to $14,999	15 (38.5)	6 (15.4)	12 (30.8)	6 (15.4)	39 (6.4)
At least $15,000	8 (33.3)	2 (8.3)	5 (20.8)	9 (37.5)	24 (3.9)
TOTAL	198 (32.2)	185 (30.1)	111 (18.1)	120 (19.5)	614

TABLE Q10.3. Crosstabulation of Household Income by Mother's Education for Head Start Families

	Mother's Education			
	Below High School n (%)	High School Diploma n (%)	Above High School n (%)	TOTAL n (%)
Household Income				
Less than $10,000	255 (51.1)	201 (40.3)	43 (8.6)	499 (83.7)
$10,000 to $11,999	10 (26.3)	21 (55.3)	7 (18.4)	38 (6.4)
$12,000 to $14,999	6 (16.7)	22 (61.1)	8 (22.2)	36 (6.0)
At Least $15,000	4 (17.4)	13 (56.5)	6 (26.1)	23 (3.9)
TOTAL	275 (46.1)	257 (43.1)	64 (10.7)	596

TABLE Q10.4. Crosstabulation of Household Income by Status of Parent's Working in Head Start Families

	Parent's Working in Family				
	Both Parents	Mother and Other Adult	Father	No One	TOTAL
Household Income					
Less than $10,000	108 (27.3)	16 (4.1)	120 (30.4)	151 (38.2)	395 (80.9)
$10,000 to $11,999	16 (43.2)	1 (2.7)	17 (45.9)	3 (8.1)	37 (7.6)
$12,000 to $14,999	18 (51.4)	4 (11.4)	12 (34.3)	1 (2.9)	35 (7.2)
At Least $15,000	15 (71.4)	1 (4.8)	5 (3.2)	0 (0.0)	21 (4.3)
TOTAL	157 (32.2)	22 (4.5)	154 (31.6)	155 (31.8)	488

TABLE Q10.5. Breakdowns (Means and Standard Deviations) of Hess Factor Scores by Household Income of Head Start Families

		Hess Factor Scores									
		School Negativism		Values of Education		Education Upward Mobility		Social Traditionalism		Positive Perceptions of Teachers	
		$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S	$\bar{X}$	S
Household Income (n)											
Less than $10,000	(327)	0.19	1.03	0.05	0.98	0.24	0.93	-0.06	1.01	0.03	1.03
$10,000 to $11,999	(22)	-0.19	0.84	-0.50	1.01	-0.22	1.09	0.26	1.14	-0.31	1.08
$12,000 to $14,999	(19)	-0.56	0.59	0.32	1.03	-0.03	0.81	-0.03	0.91	-0.09	0.90
At least $15,000	(13)	0.16	1.06	-0.12	1.17	-0.13	0.99	0.02	0.80	0.19	0.95
TOTAL SAMPLE	381	0.13	1.01	0.03	0.99	0.18	0.94	-0.04	1.00	0.01	1.03

TABLE Q10.6. Crosstabulation of Eligibility to Participate in Head Start and Region

	Region				
	Northeast	Southeast	Southwest	West	TOTAL
	n (%)	n (%)	n (%)	n (%)	n (%)
Eligibility					
Eligible	112 (29.6)	141 (37.3)	56 (14.8)	69 (18.3)	378 (64.6)
Not Eligible	75 (36.2)	37 (17.9)	49 (23.7)	46 (22.2)	207 (35.4)
TOTAL	187 (32.0)	178 (30.4)	105 (17.9)	115 (19.7)	585

TABLE Q10.7. Crosstabluation of Per Capita Income and Region for Head Start Families

	Region				
	Northeast	Southeast	Southwest	West	TOTAL
	n (%)	n (%)	n (%)	n (%)	n (%)
Per Capita Income					
$1 to $599	15 (11.5)	71 (54.2)	19 (14.5)	26 (19.8)	131 (21.4)
$600 to $999	55 (34.2)	51 (31.7)	28 (17.4)	27 (16.8)	161 (26.3)
$1000 to $1499	58 (43.9)	31 (23.5)	21 (15.9)	22 (16.7)	132 (21.6)
$1500 to $2099	30 (32.3)	23 (24.7)	19 (20.4)	21 (22.6)	93 (15.2)
$2100 to $2999	24 (38.7)	7 (11.3)	16 (25.8)	15 (24.2)	62 (10.1)
At Least $3000	15 (45.5)	2 (6.1)	8 (24.2)	8 (24.2)	33 (5.4)
TOTAL	197 (32.2)	185 (30.2)	111 (18.1)	119 (19.4)	612

TABLE Q10.8. Crosstabulation of Per Capita Income of Head Start Families by Ethnicity

	Family Ethnicity			
	Black n (%)	White n (%)	Other n (%)	TOTAL (n (%)
Per Capita Income				
$1 to $599	92 (70.2)	22 (16.8)	17 (13.0)	131 (21.4)
$600 to $999	79 (49.1)	54 (33.5)	28 (17.4)	161 (26.3)
$1000 to $1499	59 (44.4)	58 (43.6)	16 (12.0)	133 (21.7)
$1500 to 2099	28 (30.1)	46 (49.5)	19 (20.4)	93 (15.2)
$2100 to $2999	14 (22.6)	33 (53.2)	15 (24.2)	62 (10.1)
At least $3000	8 (24.2)	18 (54.5)	7 (21.2)	33 (5.4)
TOTAL	280 (45.7)	231 (37.7)	102 (16.6)	613

Question 11: Parent Characteristics Associated with Parent Involvement

Question 5 of the RFP, which focused on aspects of families and centers which were related to parent involvement, provided an opportunity to contrast two different notions about the sources of motivation for involvement. On the one hand, parental economic and educational status was considered a source of involvement on the assumption that the values which distinguished between parents of different socio-economic statuses would predict motivation to become involved. On the other hand, the assumption was made that all parents were motivated to become involved, but those who had fewer resources in time and energy would tend to be less involved. Resources in time and energy were estimated in terms of the number of adults in the family who worked and who therefore had limited time to become involved. It also was estimated by the number of adults in the family on the grounds that the more adults present, the greater the resources for in-household child care so that at least one parent could be able to leave the house to attend Head Start activities.

The findings of Question 5 indicated that some measures of in-home resources did predict involvement, along with indicators of SES. In order to examine these contributors in greater depth, the present study considers the complex of parental attitudes, home factors, and SES as interrelated paths toward involvement in the Head Start programs and centers. Note that this issue considers the factors predicting involvement. The alternate issue, the impact of involvement as a Head Start program component on family resources and ultimately on child performance, is considered in Question 9.

Is there a predominant set of interrelationships among SES and attitudinal factors which leads to heightened levels of involvement?

Yes. White parents with somewhat higher incomes tend to have higher levels of involvement if they also have the higher educational attainments which are associated with families who supply more educational materials to children at home.

Technical Discussion

The parent interview administered in the transition study asked parents to report their participation in Head Start activities as well as their interaction patterns with their children, other Head Start parents, and their children's teachers. Tables Q11.1 thru Q11.4 provide frequencies of four indices of parent involvement. Table Q11.1 displays how frequently parents helped at the Head Start center. It becomes immediately apparent that indeed Head Start centers are actively trying to get parents involved in center activities. Two-thirds of the parents were actively involved in Head Start center activities with almost one-half of the parents helping out at least once a month.

A second index of parent involvement pertains to the interaction of parents with other parents. Table Q11.2 shows the frequency of parent interaction with other parents of Head Start children. Again it is quite apparent that the Head Start centers are providing opportunities for parents to get together with other parents. Less than seven percent (6.5%) of the Head Start parents indicated they did not have the opportunity to participate in these parent activities. The majority of Head Start parents attend these activities once every one or two months (46.2%) or twice a month (31.9%). In general, the Head Start parents report quite a lot of interaction with other Head Start parents.

The number of times a parent went to talk with the child's teacher provides a third index of parent involvement and is displayed in Table Q11.3. The majority of parents talked with the teacher once or twice.

A fourth measure of parent involvement reflects the parent interaction with the child in the home environment. The distribution of the number of times the child asked the parents for help with school work is found in Table Q11.4. Forty-three percent of the parents indicated the children asked them for help with school work every day.

In an attempt to determine factors associated with variation in rate of parent involvement, these four indices of involvement of Head Start parents were examined relative to a number of variables. These variables included family background characteristics (ethnicity, family size, number of adults, employment status of parents), socio-economic status (per capita income, mother's education), parental attitudes (attitudes toward school, locus of control, child's expectations), home environment (learning materials), demographic variables (region, city size), and center characteristics (auspices, center ethnicity, center activities). An indepth look at the relationship of these variables with respect to the rates of parent involvement can be found in Question 5 of Chapter 4.

At this point it becomes obvious that there exists a subtle interplay between certain characteristics of centers and certain characteristics of parents who enroll their children in those centers. It seems certain that this complex interaction between center and parent characteristics may have a profound effect on the rates of parent involvement. It seems obvious that a causal model intergrating these variables is cursive and circular so that every variable can be expected to contribute to the variance of a number of other variables in the model. It is necessary to use very careful procedures, such as path analytic techniques, to identify those factors which might reasonably be considered antecedents of parent involvement. Such an analysis would not only yield a fuller understanding of the center-parent-community as a system, but would also increase ones understanding of what factors might be manipulated to increase the possibility of higher rates of involvement in the affairs of the center and in the education of their children.

The Model. The independent variables included in the causal model of parent involvement were measures of ethnicity, socio-economic status such as per capita income and mother's education level, parental attitudes toward school and toward the value of education, and home learning environment as well as certain center characteristics such as auspices, center ethnicity and the emphasis of academic activities. The dependent variables included in the study were indices of parental involvement at the Head Start center, interaction with other Head Start parents, interaction with child's teacher, and an index of how often the child sought help from parents on school work at home. Inclusion of these variables in a causal model allows for potential interpretations of antecedents of parents involvement in a complex center-parent-community system.

Figures Q11.1 to Q11.4 displays the path diagrams for this model. The unidirectional arrows represent direct paths of causal influence. In this model, the home environment index and the two measures of school attitude, school negativism and the value of education, were considered dependent upon the parents' ethnicity and two measures of socio-economic background, per capita income and mother's educational attainment. These two socio-economic measures were assumed to depend directly upon the ethnicity of the parents (coded 1 for Black and 2 for White).

The emphasis of academic activities in the Head Start Center was seen as a function of two center characteristics, auspices and center ethnicity. The auspices of the Head Start Center was entered as two dummy coded variables, one indicating operation of the center by public schools and the other operated by local Community Action Agencies. Similarly, center ethnicity was entered into the regression equations using two dummy coded variables, Black center and White center variables. Centers with 70% or more of their students being Black received a code 1 for the BLACK CENTER variable while those centers enrolling 70% or more White students received a code 1 for the WHITE CENTER variable. In addition, academic emphasis in the Head Start was also seen to be influenced by characteristics associated with the parents of the children enrolled. In particular, the two socio-economic measures, per capita income and mother's education level, may serve as surrogates of values of parents which enter into the determinations of which activities were to be emphasized in the Head Start Center. This model assumes that parents' ethnicity influenced the academic activities of the center only indirectly through their influence on the socio-economic status of the family, namely, per capita income and mother's educational level.

The dependent measures of parent involvement were considered dependent upon center auspices, center ethnicity, the emphasis of academic activities in the center, parent ethnicity, a measure of home environment, and two parental attitudes (school negativism and the value of education). This model allows socio-economic factors to influence parent involvement indirectly through their influence of the home environment and parental attitudes toward education.

The Data. The parent interview questionnaire was used to obtain information about the socio-economic background of the parents participating in the study, about parent attitudes toward school, and about parent involvement in a number of areas. Only parents with children enrolled in Head Start were used in the analysis. Center characteristics were taken from the center questionnaire. This center information was disaggregated to parent level by tagging center data to each child enrolled in its respective center.

Direct regression routines used to estimate path coefficients displayed by the recursive path models require the input or calculation of a matrix of zero-order correlations. By using listwise deletion in the computation of these correlation matrices, every parent included in the analyses had a valid response to each of the variables entered in the model. The number of subjects used in each model varied slightly due to missing information of the dependent variables. The sample sizes used in subsequent analyses are as follows: 165 for the analysis of parent involvement at the Head Start Center; 168 for the examination of parent interaction with the child's teacher; 162 for the analysis of parent involvement with the child in the home; and 157 for the examination of parent interaction with other Head Start parents.

Results. The results of subsequent path analytic procedures are shown in Figures Q11.1 to Q11.4 in the form of estimated standardized regression coefficients. The results confirmed the hypothesized positive effects of parent ethnicity (coded 1 for Black and 2 for White) on the two socio-economic measures, per capita income and mother's level of educational attainment. Being White appears to be an advantage in terms of socio-economic status. The results of the regression of home environment on per capita income, mother's education and parent ethnicity also confirm prior expectations. The positive effect of these variables on home environment clearly support the premise that cultural and socio-economic factors influence the opportunities for fostering specific kinds of home environments. Generally, mothers' education and parent ethnicity have a profound effect on home environment while higher per capita incomes provided a slight advantage in terms of increased home stimulation.

Where the regression of parental school attitudes on the two socio-economic variables and parent ethnicity were considered some prior expectations were confirmed, yet some surprises were produced. The negative effect of parent ethnicity on school negativism and value of education reflect a tendency of Blacks to feel somewhat powerless and alienated with respect to school changes, while continuing to foster an attitude that education offers a potential avenue to success in future endeavors. Mother's education was also hypothesized to have a positive effect on the parent's attitude toward the value of education and a negative effect on school negativism. The path coefficients confirmed this hypothesis. Parents with greater educational attainment believe in the virtues of a good education and believe that their efforts to improve the schools would be supported by teachers and principals. However, examining the effects of per capita income on these two school attitudes provided somewhat surprising results. Apparently, parents with higher per capita income have lower expectations of the value of education and entertain somewhat more negative attitudes toward school.

The results of the regression of academic activity emphasis on the Head Start Center on the dummy coded variables denoting auspices and center ethnicity as well as the two socio-economic variables confirmed most of the prior expectations. Predominantly Black centers are emphasizing these activities. The high negative path coefficient (-.41) of local CAA operated centers indicate a relatively strong indication that these centers emphasize other types of activities and emphasize academics to a lessor extent than centers under different auspices.

The effect of socio-economic variables on academic activities in the Head Start Center was considered. It was anticipated that this effect would be slightly positive. Parents of high socio-economic status perhaps would seek out Head Start centers where academic activities were an integral part of the curriculum. However, these effects were found to be minimal, and hence produce no effect on the decisions to emphasize academic activities within the center.

The regression of the four involvement measures on auspices, center ethnicity, academic emphasis, home environment, school negativism, and the value of education produced some interesting results. Foremost, it appears that the home environment has a strong effect on all measures of parent involvement. Parents who expose their children to a greater number of educational materials in the home apparently take an active part in the education of their children by involving themselves in activities of the Head Start Center, talking with the child's teacher, interacting with other Head Start parents and helping the child at home. The standardized partial regression coefficients of parent involvement regressed on the home environment index remained relatively consistent ranging from .21 to .26. It should be noted that an alternative causal path, in which involvement has an impact on home stimulation, is not being tested here. The component of each of these variables considered in the present causal model is that in which home environment contributes to involvement. The alternative model is discussed in Question 9.

The effects of parent attitudes on parent involvement were also examined. With respect to school negativism, parents who felt powerlessness or alienation toward school tended to interact with their child's teacher or become involved in Head Start activities infrequently. Also, these parents have the opportunity to interact with other Head Start parents only occasionally. However, the children of these parents actively sought help on school work at home at a much higher rate. When the effect of parents' attitudes toward the value of education or parent involvement was examined, its effect was positive. The greater the value placed on education the more the parents were involved, particularly with respect to talking with the child's teacher.

When the effects of academic activity emphasis in Head Start Centers was considered, it was found to have a slight negative effect, particularly when the involvement dealt with interaction with the child's teacher. The more emphasis on academics the less parental involvement in the center and with the classroom teachers. It should be noted that academic emphasis at the Head Start Center had no effect on the number of times a child asked their parents for help on school work in the home.

With respect to the direct effects of auspices on parent involvement, a problem arose as a result of the listwise selection procedure which had to be used here. This procedure resulted in a somewhat disproportionate number of White, high involvement families being selected. Since ethnicity is confounded with auspices, the comparison between different auspices on rates of involvement had to be adjusted. There were no essential differences between centers under different auspices following adjustment for this problem, which is a replication of the findings reported in Question 5. No other effects of this selection procedure were noted.

The ethnicity of the center has relatively little direct effect on two of the parent involvement indices. However, parents with children enrolled in predominantly Black centers are asked by their children for help on school work more frequently as evidenced by the relatively high (.35) positive path coefficient. The interpretation of this relatively strong relationship must be continuously explored due to potential confounding by regional effects. Most of the predominantly Black centers are found in the Southeast where children enter directly into first grade as opposed to entering into Kindergarten. It is entirely possible that first grades have more projects or homework outside of school and thus seek more help from their parents on these occasions. On the other hand, it truely may be a phenomena of predominant Black centers. In addition, parents with children enrolled in predominantly White Head Start Centers tend to become involved with other Head Start parents more often than parents found in predominantly Black centers. The remaining direct effects of center ethnicity are minimal.

The estimated direct effect of parent ethnicity on parent involvement are relatively small. While all the effects are positive between parent ethnicity (coded 1 for Black and 2 for White) and the four measures of parent involvement none of the path coefficients are greater than .10. However, the total effect of parent ethnicity on parent involvement was much greater due to the indirect effects of parent ethnicity on socio-economic factors, school attitudes and home environment. This is particularly true with respect to parent involvement at the Head Start Center. Whites tend to have higher per capita income and higher levels of educational attainment which in turn is positively related to the number of educational materials in the home which is positively associated with participation on Head Start activities. Similarly, Whites tend to have a less negative attitude toward school which is related to more involvement at the center. In essence, when the direct and indirect effects of parents ethnicity are taken into consideration Whites tend to be more involved.

Conclusion

The preceding models have attempted to present a causal explanation for variations in rates of parent involvement at Head Start Center, with teachers, with other Head Start parents, and with their children. By no means do these models explain all the variations in rates of involvement for these four indices. A large portion of the variations is due to variables not included in the models. However, there appears to be some general consistencies across these models which are of potential interest.

First of all, it is very apparent that the home environment is a major contributor to parent involvement. To a lesser extent, the reverse is also true. This issue is discussed in Question 5. Parents providing a great number of educational materials in the home are also actively participating in Head Start activities, involved with other parents of Head Start children, talk with the teacher more often, and help their children with school work in the home. These parents who have made a concerted effort to provide a stimulating home environment for their children are concerned with the educational experiences provided their children. As a result, given the opportunities to become involved in the educational progress of their children they actively participate.

A second major factor contributing to parent involvement is the parent's attitudes toward schools. Those parents who feel their efforts to improve the schools are futile are less compelled to become actively involved in activities associated with the school. This sense of powerlessness and alienation leads to resentment and consternation, resulting in a total negative effect on parent involvement. If parents were encouraged to participate in school activities, and saw some positive results from these efforts, parent's negative school attitudes would diminish and parent involvement may increase.

It seems clear that the extent to which a parent becomes involved with the center or with the Head Start program is a very complex expression of the value system which parents bring to the parenting task. The factors which inhibit parents from contact with the program appear to be deeply rooted in the sense of self and the sense of value in the schooling process. These are factors which are not amenable to simple manipulation and may be influenced only through a long term process of increasing confidence in Head Start as a means of improvement in the future life conditions of their children. Parents who now spend time in the involvement process do appear to have this confidence in the future and in Head Start's role in improving the future.

This picture of the factors associated with involvement suggests that there is no simple formula or technique which can impact on the rate of parental involvement. As Head Start increases its image generally, as it continues to announce its presence as a successful means of personal improvement, as it offers more and more evidence of its success and support in the community, it will gain the kind of role-image necessary to be an effective magnet for the non-involved parent. Involvement should not be seen therefore as a means of improving the program. It is, rather, and expression of the success of the program if success can be defined as an increase in the belief that childrens' futures can, in the eyes of parents, be improved through the Head Start experiences.

TABLE Q11.1

How Often Does Parent Help at Head Start Center

Category Label	Absolute Frequency	Adjusted Frequency (PCT)	Cummulative Frequency (PCT)
Did not help	269	33.3	33.3
Less than 4 times year	67	8.3	41.6
4 times year	80	9.9	51.5
Once a month	100	12.4	63.9
Twice a month	130	16.1	80.0
Once a week	161	20.0	100.0
TOTAL	807	100.0	

MISSING CASES - 227

TABLE Q11.2

Parent Involvment With Other Head Start Parents

Category Label	Absolute Frequency	Adjusted Frequency (PCT)	Cummulative Frequency (PCT)
Did not meet	50	6.5	6.5
4 time year or less	86	11.1	17.6
Once 1 or 2 months	357	46.2	63.9
Twice a month	246	31.9	95.7
Once a week	33	4.3	100.0
TOTAL	772	100.0	

MISSING CASES - 262

TABLE Q11.3

How Many Times Did Parent Talk With Teacher

Category Label	Absolute Frequency	Adjusted Frequency (PCT)	Cummulative Frequency (PCT)
Did not talk	143	17.4	17.4
1 time	210	25.5	42.9
2 times	185	22.5	65.4
3 times	103	12.5	77.9
4 times	75	9.1	87.0
5 or more times	107	13.0	100.0
TOTAL	823	100.0	

MISSING CASES - 211

TABLE Q11.4

How Often Does Kid Ask Parent For Help

Category Label	Absolute Frequency	Adjusted Frequency (PCT)	Cummulative Frequency (PCT)
Once a month	107	13.9	13.9
2 or 3 per month	34	4.4	18.4
Once a week	115	15.0	33.3
Several times a week	180	23.4	56.8
Every day	332	43.2	100.0
TOTAL	768	100.0	

MISSING CASES - 266

Figure Q11.1. Recursive Path Model of Involvement at Head Start Center

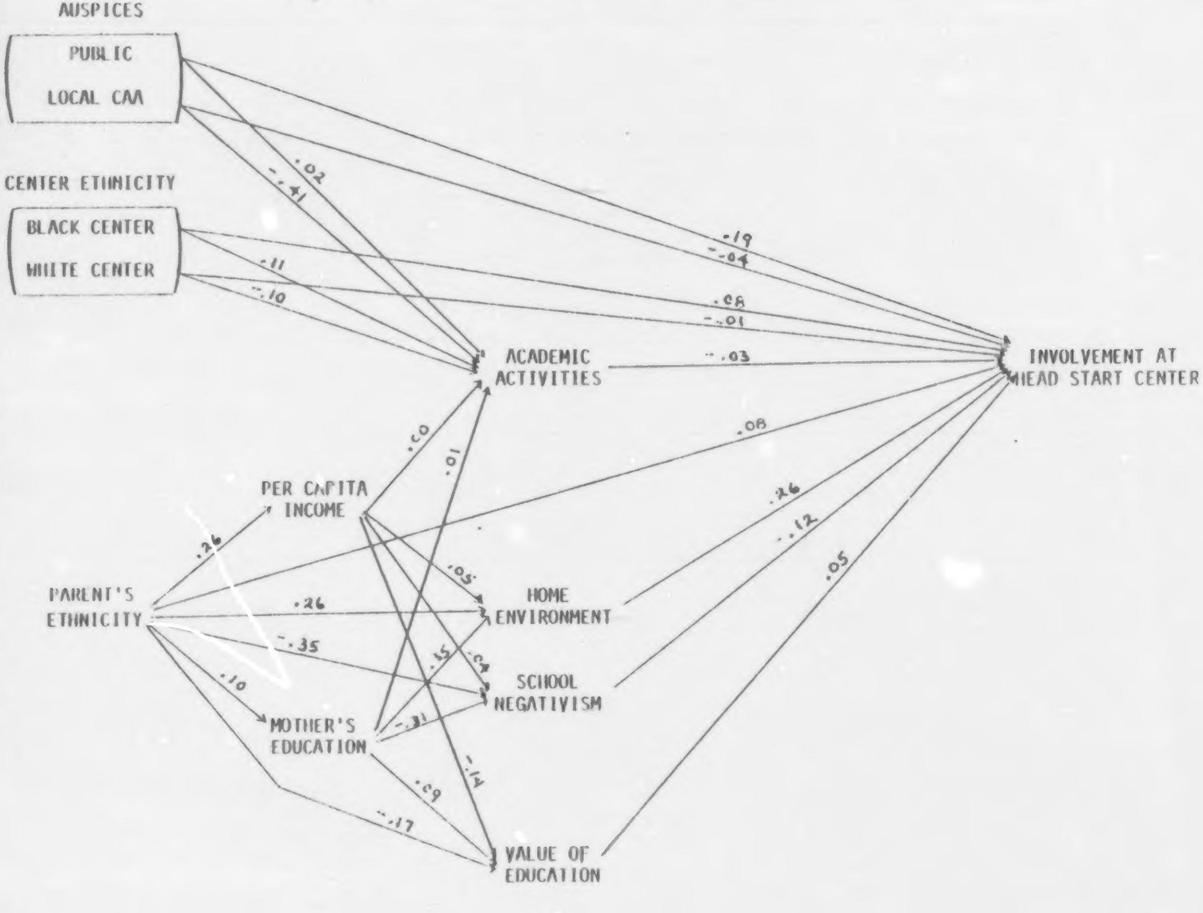

AUSPICES
PUBLIC
LOCAL CAA
CENTER ETHNICITY
BLACK CENTER
WHITE CENTER
.02
-.41
-.11
-.10
-.19
-.04
.08
-.01
ACADEMIC ACTIVITIES
-.03
INVOLVEMENT AT HEAD START CENTER
.08
.00
.01
PER CAPITA INCOME
.26
.26
-.12
.05
PARENT'S ETHNICITY
.26
.05
HOME ENVIRONMENT
-.35
.35
.04
SCHOOL NEGATIVISM
.10
MOTHER'S EDUCATION
-.31
.09
-.14
-.17
VALUE OF EDUCATION

Figure Q11.2. Recursive Path Model of Involvement With Teacher

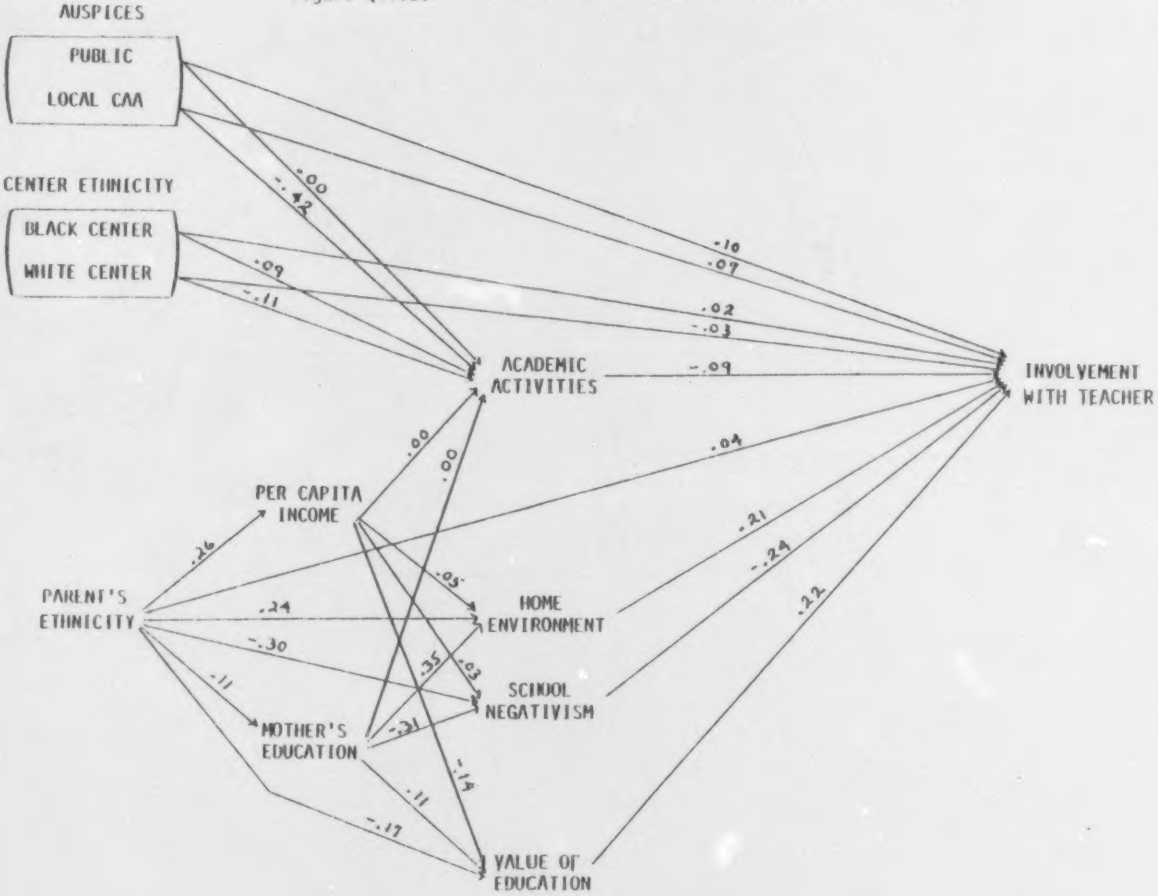

AUSPICES
PUBLIC
LOCAL CAA
CENTER ETHNICITY
BLACK CENTER
WHITE CENTER
-.00
-.42
.09
-.11
.10
.07
.02
-.03
ACADEMIC ACTIVITIES
-.09
INVOLVEMENT WITH TEACHER
.04
.00
.00
PER CAPITA INCOME
.26
PARENT'S ETHNICITY
.21
-.24
.22
.05
HOME ENVIRONMENT
.24
-.30
.35
-.03
SCHOOL NEGATIVISM
-.11
MOTHER'S EDUCATION
-.31
-.14
.11
-.17
VALUE OF EDUCATION

Figure Q11.3. Recursive Path Model of Involvement With Child at Home

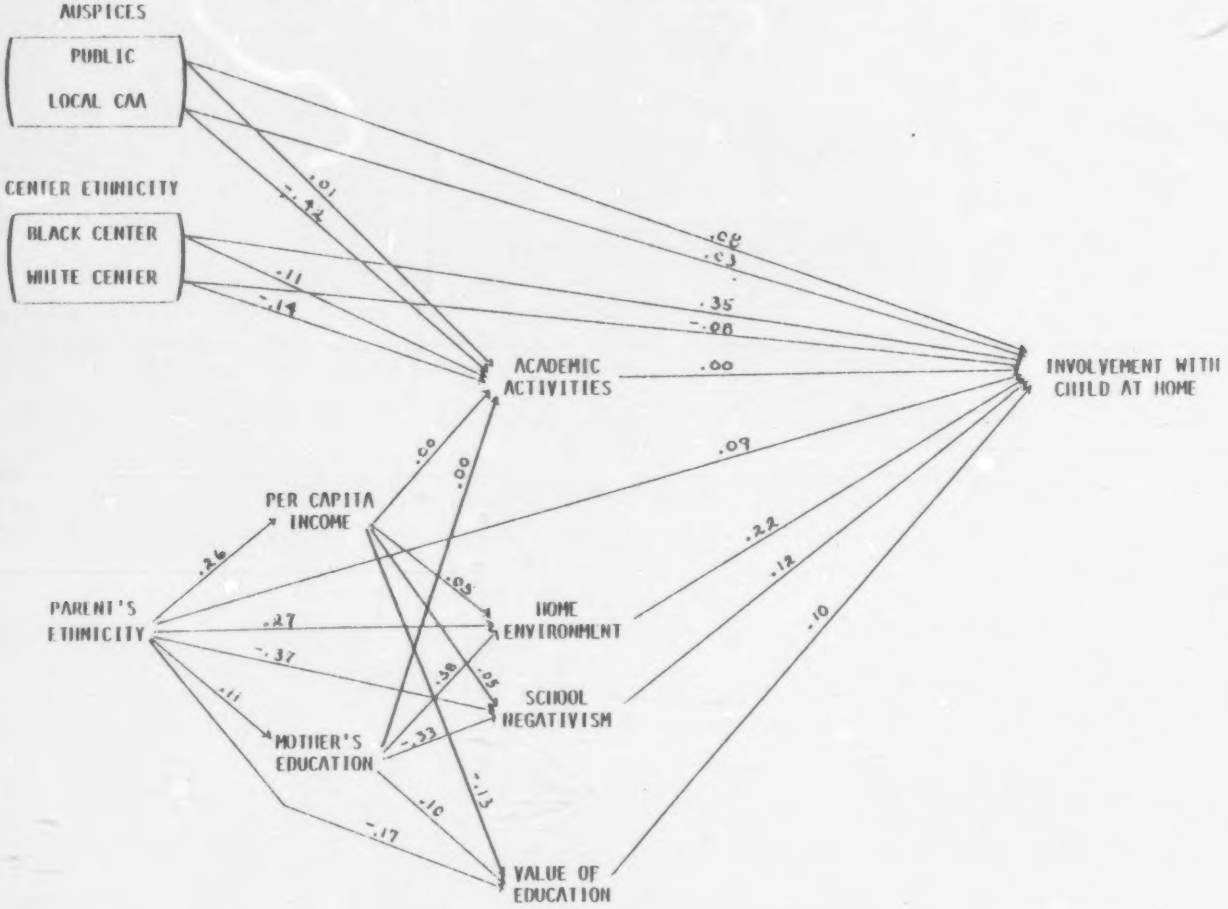
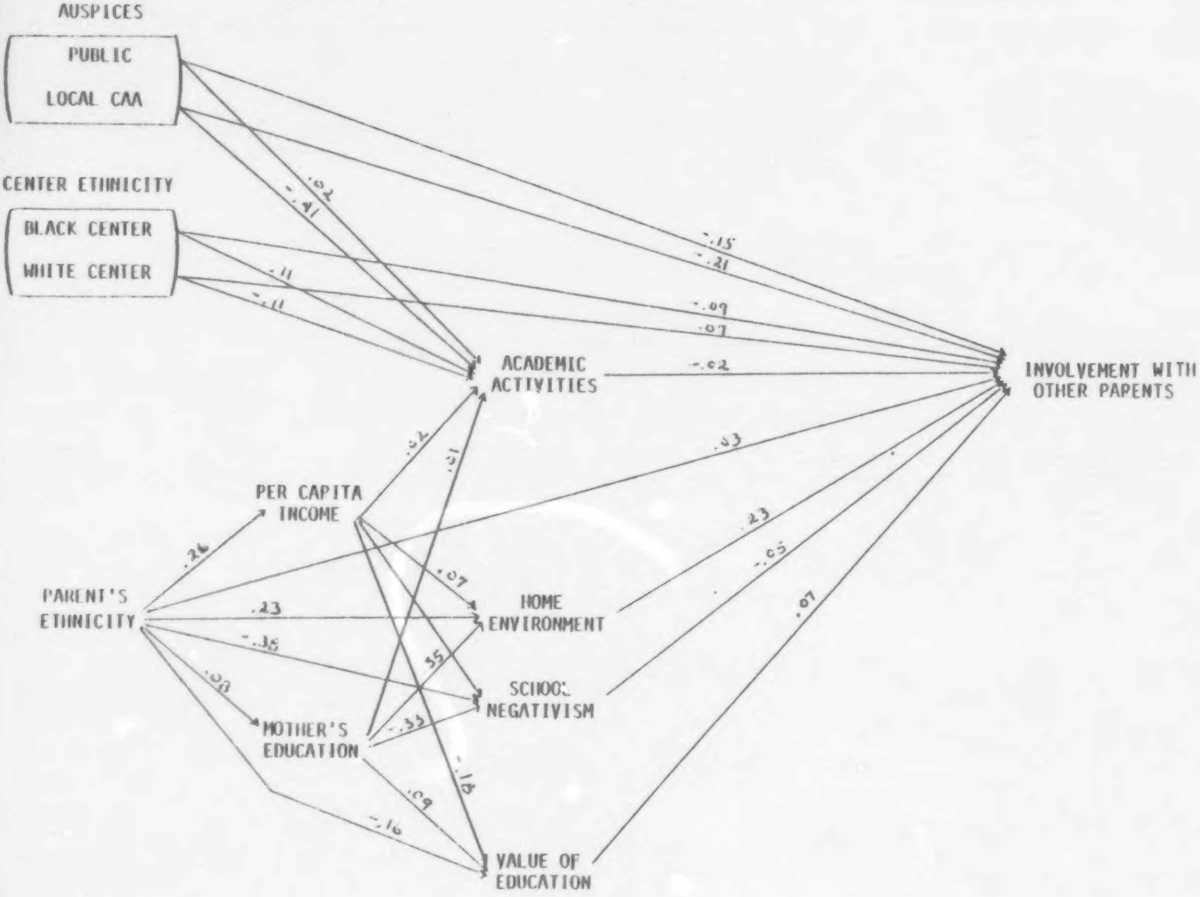

AUSPICES
PUBLIC
LOCAL CAA
CENTER ETHNICITY
BLACK CENTER
WHITE CENTER
.01
-.12
.08
.03
.11
-.14
.35
-.08
ACADEMIC ACTIVITIES
.00
INVOLVEMENT WITH CHILD AT HOME
.09
.00
.00
PER CAPITA INCOME
.26
.03
.22
.12
PARENT'S ETHNICITY
.27
HOME ENVIRONMENT
.10
-.37
.58
.05
.11
SCHOOL NEGATIVISM
MOTHER'S EDUCATION
-.33
-.13
.10
-.17
VALUE OF EDUCATION

Figure Q11.4. Recursive Path Model of Involvement With Other Parents


AUSPICES
PUBLIC
LOCAL CAA
CENTER ETHNICITY
BLACK CENTER
WHITE CENTER
.02
-.41
-.11
-.11
-.15
-.21
-.09
.07
ACADEMIC ACTIVITIES
-.02
INVOLVEMENT WITH OTHER PARENTS
.03
.02
.31
PER CAPITA INCOME
.26
.23
-.05
.07
PARENT'S ETHNICITY
.23
HOME ENVIRONMENT
-.38
.55
.08
SCHOOL NEGATIVISM
-.33
MOTHER'S EDUCATION
-.18
.09
-.16
VALUE OF EDUCATION
.07

Question 12: Length of Enrollment as a Factor in Child Outcomes

The analysis of effects of activity variables describing Head Start center programs has been reported in Question 1. In this section, the role of length of enrollment in preschool and the length of enrollment in Head Starts with particular activity emphases is reported.

Does the pattern of time in preschool vary across regions?

Yes. In the Southeast, where there are no public kindergartens, half of the Head Start children were enrolled for more than a calendar year (i.e., two full school year terms), and half were enrolled for just one full term. In the Northeast and in the West, Head Start children were concentrated to a greater extent in the one full term category (70%), and children in the Southwest were concentrated even more (80%) in the one full term category.

The pattern of enrollment time for non-Head Start preschoolers is considerably different from the Head Start pattern. These children are much more variable in their enrollment lengths; higher proportions of them attended preschool two full terms, and higher proportions of them attended preschool for less than a full term than their Head Start counterparts. Proportionally fewer of these children attended preschool for the typical Head Start enrollment time, just one full term.

Does the length of enrollment in Head Start contribute to the performance of children in academic or affective measures?

To some extent. The few Head Start children in the Southwest and West who were enrolled for two full terms scored higher on a reading and on a math subtest than their counterpart Head Starters who enrolled for either one full term or less than a full term.

Does the length of enrollment in Head Start programs with particular activity emphases contribute to the performance of children on academic or affective measures?

There is no support for the notion that longer enrollments in centers described by their directors as having particular activity emphases is associated with any higher scores on any of the outcome measures.

Technical Discussion

Length of enrollment is measured by parental reports of the number of months the child attended a preschool program before entering public school. The distribution of months in preschool by type of preschool attended within each region is presented in Table Q12.1. It is clear that Head Start children typically attended preschool for 7-13 months in each region except the Southeast. There are a significantly large number of children who also attended over 13 months. This most likely reflects the fact that there are no public kindergartens in this region and that Head Start children had an opportunity to attend preschool during their fourth as well as their fifth year. Children who attended Head Start plus some other preschool (probably before entering Head Start) typically attended for a greater total number of months than children who attended just Head Start. This varies by region so once again it is important that the procedure of blocking by region be continued here.

The effects of months in preschool are summarized in Tables Q12.2 to Q12.5 and the effects, within Head Start of the interaction of length of enrollment and each activity emphasis is presented in Tables Q12.6 to Q12.17. In addition, Table Q12.18 presents the adjusted mean outcome scores for the Head Start children in the West and Southwest within each category of length of enrollment for the outcomes which showed the effect of enrollment. Note that the effects are generated through the same regression procedures used throughout, and that the adjusted means reported are from the residuals of outcome variance after the adjusting variables have been removed.

Conclusions

The scattered findings with respect to the effects of length of enrollment pose a problem of interpretation. There are enough effects in the Southwest and West to suggest that length of enrollment has some kind of impact on the process of learning. However, since the specific areas of effects vary across the two regions, the process by which a longer time in the program can enhance the acquisition of particular skills cannot easily be identified. It is difficult to guess why an increase in enrollment time yields an improvement in, for example, written math in the West and oral math in the Southwest. Although the processes underlying these two math tasks may appear similar, the scales were developed so that they are uncorrelated with each other. If the enrollment influenced a math process of some sort, it should be consistent in the subscale in which its effects become manifest.

It is also possible to consider that the length of enrollment is important only if it allows a potentially effective curriculum to become operative. This is examined through the interactions between time of enrollment and activity factor and here no evidence is present to suggest such a notion. There are no interations between enrollment time and activity which are significant for the subtests under question. Indeed, there are no real significances at all for these interactions. It is necessary to conclude that based on the present data set, an increase in the amount of time spent in any one of the activity emphases does not contribute to any discernible academic consequences. Under normal circumstances, the rejection of an hypothesis about an interaction requires that the main effects be considered as non-significant. However, in this case, to ignore the findings that in some instances length of enrollment does have an effect would be to commit an undesirable error in this kind of study. The error is to be hasty in rejecting a potentially valuable hypothesis.

There would be a benefit to holding on to the hypothesis of an effect of increased enrollment since the policy consequences of the verification of such an hypothesis could be very important. It is necessary, however, to indicate what must be done if we change our standards for hypothesis rejection in the present case. It would be very important to take as the next task an attempt to determine the actual events associated with increased time of enrollment in the cases in which it is and in the cases in which it is not effective in producing increased performance. Simply to continue to assert that increased enrollment time may in some places and in some academic domains produce increased performance does not allow anyone to act on that assertion. It is necessary that conditions under which enrollments become effective be discerned and that can only occur through an in-depth examination of local conditions (classroom and child level analysis). There is enough justification in the present data to indicate that the most important finding of this section is that such an in-depth study should be done and would yield educationally valuable results.

There is at least two other reasons why an in-depth examination of the time in enrollment is desirable. The first is associated with a point made several times elsewhere in this report. That is, the method of measuring the programs in Head Start, as used in this study, leaves much to be desired. Recall that the measure is based on center directors' judgments about the relative importance and level of usage of a variety of activities in their centers. There has been no verification of those judgments, and there is no way to sort out the many extraneous sources of judgments which might contribute to the directors' reports about their centers. In addition, there is no way of determining the extent to which the activities which the directors judged as important in their centers, were in fact delivered to any of the children from their centers who found their way onto the present data base. Recall that many centers were represented on this base by as few as 10% of the children in a Center and those children were not selected according to any sampling frame. It is therefore entirely possible that the full direct potential of any academic program, or the indirect academic potential of social and expressive activities, cannot be revealed in this data base because of a lack of valid measurement. It is equally possible that the accumulation of effects, whether they be of academic skills, or a sense of social and personal strength, does take more than a single year to have an impact on academic performance in public schools. The length of enrollment should have a measurable effect on predicting such performance and since there is a small amount of evidence that this might be true, there is every reason to insist on a valid measure of program to be included in a test of the enrollment hypothesis before it is rejected.

It is also important to note that since there appears to be a consistent effect of Head Start on the Assertiveness measure, and since there is substantial theoretical justification to expect that Assertiveness should have some long term effects on some aspects of academic performance, it seems quite unjustified to hastily reject any notions about time of enrollment.

A second reason why this factor should be examined in depth before any conculsions are drawn has to do with the fully indirect sources of academic development which Head Start attempts to stimulate. Here we refer to the parent programs which are designed to achieve among other goals, changes in those parental skills and home behaviors which are expected to create improved learning conditions for the children. It is difficult to imagine that the processes unleashed by changes in the style of parenting, and in that style which might be uniquely effective on the childrens' academic performance, do not take their effects slowly and over a relatively long period of time. We know very little of this process, of course, and it is not at all clear that critical developmental stages in the growth of parental confidence in the alternative parenting styles and their ability to engage in them effectively is not required before any impact of parenting programs can be discerned. Thus, we don't know how long to administer the programs before looking for effects, but the longer the better is not unreasonable. We conclude therefore, that the areas of time of enrollment is much too subtle an issue to deal with in terms of the gross measures available in large studies such as the present one. And it is too central a number of critical policy questions to draw conclusions about too quickly. Considerably more needs to be done in this area before these policy questions can be resolved.

TABLE Q12.1

Distribution of Months in Preschool

by Type of Preschool and Area

TYPE OF PRESCHOOL	NORTHEAST				SOUTHEAST				SOUTHWEST				WEST				ALL REGIONS			
	1 to 6 mo.	7 to 13 mo.	over 13 mo.	Total	1 to 6 mo.	7 to 13 mo.	over 13 mo.	Total	1 to 6 mo.	7 to 13 mo.	over 13 mo.	Total	1 to 6 mo.	7 to 13 mo.	over 13 mo.	Total	1 to 6 mo.	7 to 13 mo.	over 13 mo.	Total
Other Preschool	13	31	17	61	8	17	20	45	6	13	14	33	20	19	28	67	47	80	79	206
Head Start only	14	157	48	219	7	107	98	212	6	95	19	120	14	85	28	127	41	444	193	678
Head Start and Other	0	9	9	18	5	12	22	39	0	12	15	27	3	16	15	34	8	49	61	118
	27	197	74	298	20	136	140	296	12	120	48	180	37	120	71	228	96	573	333	1002

TABLE Q12.2

Summary of Regression Analyses
Months in Preschool Effect
Northeast Region

Variable	N	R^2_A	R^2_{Total}	F	Sign	Significance of b's				
						MAED	PERCAP	HOMESTH2	RACE	MONTHS IN PRE
Spell & Read Words	154	.040	.040	.00						
Name Letters	154	.090	.090	.02				*$^+$		
Copy Marks	154	.116	.118	.40				**$^+$		
Letter Recognition	154	.114	.114	.07				**$^+$		
Written Math	154	.003	.003	.11						
Oral Math I (Easy)	154	.144	.144	.01				**$^+$		
Oral Math II (Difficult)	154	.023	.026	.42						
Counting Dots	154	.013	.019	.97						
All American	130	.111	.112	.11			*$^+$	*$^+$	*$^-$	
Assertive	130	.030	.062	4.14	*					*$^-$

* implies p .05
**implies p .01
+/-indicates direction of b

TABLE Q12.3

Summary of Regression Analyses
Months in Preschool Effect
Southeast Region

Variable	N	R^2_A	R^2_{Total}	F	Sign	Significance of b's				
						MAED	PERCAP	HOMESTM2	RACE	MONTHS IN PRE
Spell & Read Words	176	.043	.043	.01						
Name Letters	176	.065	.068	.65			$**^+$			
Copy Marks	176	.027	.028	.06						
Letter Recognition	176	.079	.079	.124		$**^+$	$**^-$			
Written Math	176	.019	.058	6.98	**					$**^-$
Oral Math I (Easy)	176	.009	.010	.15						
Oral Math II (Difficult)	176	.063	.064	.19			$**^+$			
Counting Dots	176	.002	.021	3.70						
All American	129	.139	.180	6.22	*		$*^+$		$*^-$	$*^+$
Assertive	129	.030	.052	2.81						

* implies p   .05
**implies p   .01
+/-indicates direction of b

TABLE Q12.4

Summary of Regression Analyses
Months in Preschool Effect
Southwest Region

Variable	N	R^2_A	R^2_{Total}	F	Sign	Significance of b's					
						MAED	PERCAP	HOMESTM2	BLACK	WHITE	MONTHS IN PRE
Spell & Read Words	85	.079	.089	.87							
Name Letters	85	.278	.305	2.94		$*^{+}$	$*^{-}$		$**^{-}$		
Copy Marks	85	.356	.357	.03		$*^{-}$			$**^{-}$		
Letter Recognition	85	.051	.052	.12						$*^{-}$	
Written Math	85	.055	.067	1.00							
Oral Math I (Easy)	85	.255	.283	3.09					$**^{-}$		
Oral Math II (Difficult)	85	.161	.162	.06					$**^{-}$	$*^{-}$	
Counting Dots	85	.084	.087	.25							
All American	73	.239	.241	.17					$*^{-}$		
Assertive	73	.141	.229	7.51	**	$*^{+}$			$*^{+}$		$**^{-}$

* implies p .05
**implies p .01
+/-indicates direction of b

TABLE Q12.5

Summary of Regression Analyses
Months In Preschool Effect
West Region

Variable	N	R^2_A	R^2_{Total}	F	Sign	Significance of b's				
						MAED	PERCAP	HOMESTM2	RACE	MONTHS IN PRE
Spell & Read Words	89	.031	.120	8.44	**					**$^+$
Name Letters	89	.052	.055	.28						
Copy Marks	89	.237	.240	.32					*$^+$	
Letter Recognition	89	.033	.046	1.12						
Written Math	89	.005	.052	4.09	*					*$^+$
Oral Math I (Easy)	89	.061	.072	.95						
Oral Math II (Difficult)	89	.216	.216	.04		*$^+$				
Counting Dots	89	.064	.090	2.32						
All American	67	.169	,173	.28						
Assertive	67	.059	.070	.79						

* implies p .05
**implies p .01
+/-indicates direction of b

TABLE Q12.6

Summary of Regression Analyses
Interaction of Time in Preschool and
Academic Knowledge and Skills
Northeast Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's						
						MAED	PERCAP	HOMESTM2	RACE	TIME IN PRESCHOOL	CENTER ACTIVITY	INTER-ACTION
Spell & Read Words	97	.070	.073	.30								
Name Letters	97	.147	.151	.41								
Copy Marks	97	.061	.062	.08								
Letter Recognition	97	.174	.174	.00				**+				
Written Math	97	.024	.037	1.12								
Oral Math (Easy)	97	.141	.154	1.35				**+				
Oral Math II (Difficult)	97	.048	.056	.68								
Counting Dots	97	.034	.044	.93								
All American	76	.139	.145	.46								
Assertive	76	.072	.119	3.64						*-		

* implies p .05
**implies p .01
+/-indicates direction of b

TABLE Q12.7

Summary of Regression Analyses
Interaction of Time in Preschool and
Academic Knowledge and Skills
Southeast Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's						
						MAED	PERCAP	HOMESTM2	RACE	TIME IN PRESCHOOL	CENTER ACTIVITY	INTER-ACTION
Spell & Read Words	92	.138	.139	.05								
Name Letters	92	.172	.217	4.83	*	$*^+$			$*^+$		$*^-$	$*^+$
Copy Marks	92	.076	.08	.29								
Letter Recognition	92	.012	.040	2.47								
Written Math	92	.124	.125	.12								
Oral Math (Easy)	92	.024	.049	2.24								
Oral Math II (Difficult)	92	.067	.076	.81								
Counting Dots	92	.655	.099	4.13	*						$*^+$	$*^-$
All American	73	.200	.213	1.08					$*^-$	$**^+$		
Assertive	73	.192	.203	.92				$*^-$		$*^-$		

* implies p .05
**implies p .01
+/-indicates direction of b

TABLE Q12.8

Summary of Regression Analyses
Interaction of Time in Preschool and
Academic Knowledge and Skills
Southwest Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's						
						MAED	PERCAP	HOMESTM2	RACE	TIME IN PRESCHOOL	CENTER ACTIVITY	INTER-ACTION
Spell & Read Words	23	.482	.924	87.74	**	$*^+$		$*^-$	$**^-$	$**^+$	$**^+$	$**^-$
Name Letters	23	.477	.554	2.58								
Copy Marks	23	.314	.320	.13								
Letter Recognition	23	.842	.866	2.74							$*^+$	
Written Math	23	.716	.725	.47				$**^-$				
Oral Math (Easy)	23	.481	.613	5.13	*	$*^+$			$*^+$	$*^-$	$*^-$	$*^+$
Oral Math II (Difficult)	23	.295	.382	2.10								
Counting Dots	23	.277	.374	2.31								
All American	19	.433	.435	.02						$*^+$		
Assertive	19	.048	.094	.60								

* implies p .05
**implies p .01
+/-indicates direction of b

TABLE Q12.9

Summary of Regression Analyses
Interaction of Time in Preschool and
Academic Knowledge and Skills
West Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's						
						MAED	PERCAP	HOMESTM2	RACE	TIME IN PRESCHOOL	CENTER ACTIVITY	INTER-ACTION
Spell & Read Words	50	.205	.209	.24						*+		
Name Letters	50	.083	.089	.29								
Copy Marks	50	.059	.060	.02								
Letter Recognition	50	.075	.078	.11								
Written Math	50	.335	.339	.24				*-		**+		
Oral Math (Easy)	50	.106	.148	2.08					*+			
Oral Math II (Difficult)	50	.207	.212	.26				*+				
Counting Dots	50	.064	.104	1.89								
All American	38	.298	.301	.12		*+						
Assertive	38	.230	.243	.52								

* implies p .05

**implies p .01
+/-indicates direction of b

TABLE Q12.10

Summary of Regression Analyses
Interaction of Time in Preschool and
Social Knowledge and Skills
Northeast Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's						
						MAED	PERCAP	HOMESTM2	RACE	TIME IN PRESCHOOL	CENTER ACTIVITY	INTER-ACTION
Spell & Read Words	97	.101	.103	.22								
Name Letters	97	.183	.210	3.01								
Copy Marks	97	.060	.068	.68								
Letter Recognition	97	.150	.167	1.85			$*^+$	$*^+$				
Written Math	97	.020	.024	.42								
Oral Math (Easy)	97	.149	.154	.47				$*^+$				
Oral Math II (Difficult)	97	.042	.135	9.57	**						$**^+$	$**^-$
Counting Dots	97	.055	.067	1.12								
All American	76	.126	.132	.44			$*^+$					
Assertive	76	.070	.120	3.84						$*^-$		

* implies p .05
**implies p .01
+/-indicates direction of b

TABLE Q12.11

Summary of Regression Analyses
Interaction of Time in Preschool and
Social Knowledge and Skills
Southeast Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's						
						MAED	PERCAP	HOMESTM2	RACE	TIME IN PRESCHOOL	CENTER ACTIVITY	INTER-ACTION
Spell & Read Words	92	.136	.141	.48								
Name Letters	92	.171	.172	.10						$\ast^{+}$		
Copy Marks	92	.083	.093	.92								
Letter Recognition	92	.067	.068	.14								
Written Math	92	.131	.132	.13								
Oral Math (Easy)	92	.032	.073	3.70							$\ast^{+}$	
Oral Math II (Difficult)	92	.061	.071	.84								
Counting Dots	92	.053	.064	1.04								
All American	73	.262	.287	2.26						$\ast\ast^{+}$		
Assertive	73	.193	.221	2.32				$\ast^{-}$	$\ast^{-}$	$\ast\ast^{-}$		

* implies p .05
**implies p .01
+/-indicates direction of b

TABLE Q12.12

Summary of Regression Analyses
Interaction of Time in Preschool and
Social Knowledge and Skills
Southwest Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's						
						MAED	PERCAP	HOMESTM2	RACE	TIME IN PRESCHOOL	CENTER ACTIVITY	INTER-ACTION
Spell & Read Words	23	.644	.864	24.94	**	**+		*-			**-	**+
Name Letters	23	.454	.517	1.97					*+			
Copy Marks	23	.249	.310	1.31								
Letter Recognition	23	.377	.427	1.30								
Written Math	23	.530	.555	.82				*-		*+		
Oral Math (Easy)	23	.481	.704	11.30	**	**+			**+		**+	**-
Oral Math II (Difficult)	23	.243	.255	.233								
Counting Dots	23	.456	.485	.85								
All American	19	.433	.446	.27								
Assertive	19	.048	.064	.20								

* implies p .05
**implies p .01
+/-indicates direction of b

TABLE Q12.13

Summary of Regression Analyses
Interaction of Time in Preschool and
Social Knowledge and Skills
West Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's						
						MAED	PERCAP	HOMESTM2	RACE	TIME IN PRESCHOOL	CENTER ACTIVITY	INTER-ACTION
Spell & Read Words	50	.224	.320	5.93	*		$*^{-}$			$**^{+}$	$*^{+}$	$*^{-}$
Name Letters	50	.113	.122	.42								
Copy Marks	50	.092	.097	.21								
Letter Recognition	50	.060	.069	.42								
Written Math	50	.332	.336	.22				$*^{-}$		$*^{+}$		
Oral Math (Easy)	50	.094	.120	1.26								
Oral Math II (Difficult)	50	.199	.203	.22				$*^{+}$				
Counting Dots	50	.054	.066	.53								
All American	38	.270	.313	1.87		$**^{+}$						
Assertive	38	.274	.276	.05								

TABLE Q12.14

Summary of Regression Analyses
Interaction of Time in Preschool and
Dramatic/Expressive Play
Northeast Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's						
						HAED	PERCAP	HOMESTM2	RACE	TIME IN PRESCHOOL	CENTER ACTIVITY	INTER-ACTION
Spell & Read Words	97	.075	.075	.01								
Name Letters	97	.148	.149	.12								
Copy Marks	97	.061	.062	.06								
Letter Recognition	97	.147	.151	.46				**$^+$				
Written Math	97	.192	.021	.17								
Oral Math (Easy)	97	.140	.140	.02				*$^+$				
Oral Math II (Difficult)	97	.042	.048	.58								
Counting Dots	97	.033	.034	.02								
All American	76	.121	.124	.20								
Assertive	76	.067	.151	6.68	*						*$^+$	*$^-$

* implies p .05
**implies p .01
+/-indicates direction of b

TABLE Q12.15

Summary of Regression Analyses
Interaction of Time in Preschool and
Dramatic/Expressive Play
Southeast Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's						
						MAED	PERCAP	HOMESTM2	RACE	TIME IN PRESCHOOL	CENTER ACTIVITY	INTER-ACTION
Spell & Read Words	92	.216	.127	.04						$*^+$		
Name Letters	92	.180	.180	.06					$*^+$			
Copy Marks	92	.101	.104	.28				$*^+$				
Letter Recognition	92	.007	.025	1.56								
Written Math	92	.117	.123	.58								
Oral Math (Easy)	92	.056	.058	.18								
Oral Math II (Difficult)	92	.084	.098	.34			$*^+$					
Counting Dots	92	.038	.087	4.51	*						$*^+$	$*^-$
All American	73	.221	.244	1.93					$*^-$	$**^+$		
Assertive	73	.237	.2399	.48				$*^-$	$*^-$			

* implies p .05
**implies p .01
+/-indicates direction of b

TABLE Q12.16

Summary of Regression Results
Interaction of Time in Preschool and
Dramatic/Expressive Play
Southwest Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's						
						MAED	PERCAP	HOMESTM2	RACE	TIME IN PRESCHOOL	CENTER ACTIVITY	INTER-ACTION
Spell & Read Words	23	.780	.924	28.75	**			*$^-$	*$^-$	**$^+$	**$^+$	**$^+$
Name Letters	23	.373	.378	.12								
Copy Marks	23	.276	.297	.43								
Letter Recognition	23	.273	.466	5.43	*						*$^-$	*$^+$
Written Math	23	.530	.546	.53				*$^-$		*$^+$		
Oral Math (Easy)	23	.482	.600	4.43	*	*$^+$			*$^-$	*$^-$		*$^-$
Oral Math II (Difficult)	23	.309	.328	.42								
Counting Dots	23	.340	.356	.37								
All American	19	.461	.463	.04								
Assertive	19	.059	.104	.55								

* implies p   .05
**implies p   .01
+/-indicates direction of b

TABLE Q12.17

Summary of Regression Analyses
Interaction of Time in Preschool and
Dramatic/Expressive Play
West Region

Variable	N	R^2_A	R^2_{Total}	F	Sign.	Significance of b's						
						MAED	PERCAP	HOMESTM2	RACE	TIME IN PRESCHOOL	CENTER ACTIVITY	INTER-ACTION
Spell & Read Words	50	.207	.373	11.14	$**$					$**^{+}$	$**^{+}$	$**^{-}$
Name Letters	50	.085	.126	1.98								
Copy Marks	50	.080	.082	.11								
Letter Recognition	50	.054	.054	.00								
Written Math	50	.332	.341	.58				$*^{-}$		$**^{+}$		
Oral Math (Easy)	50	.091	.092	.02								
Oral Math II (Difficult)	50	.200	.257	3.24								
Counting Dots	50	.053	.182	6.60	$*$						$*^{-}$	$*^{+}$
All American	38	.340	.357	.80		$*^{+}$						
Assertive	38	.224	.229	.19								

* implies p .05
**implies p .01
+/-indicates direction of b

TABLE Q12.18

Adjusted[1] Mean Outcome Scores for Head Start Children in the West and Southwest Regions

REGION	OUTCOME	MONTHS IN PRESCHOOL		
		Less Than 7	7 To 13	Greater Than 13
Southwest	Name Letters	-.41	-.45	.14
	Oral Math (Easy)	-.16	-.35	.17
West	Spell and Read Words	-.35	-.25	.38
	Written Math	-.18	-.37	.26

[1] Adjusted for Mother's Education, Per Capita Income, Home Stimulation, and Ethnicity.

Chapter 5

CONCLUSIONS

There are several points about the findings which warrent comment. Most of them have been stated in the relevant sections and will not be repeated here. However of the overall and generic issues which are present in the findings, the following seem most important to mention in a conclusions section.

A. Academic and Emotional Development of Head Start Children.

The evidence that Head Start children have accumulated some knowledge and skills during their year before entering public school and that they perform better on a standard achievement test in the middle of their first year in public because of their Head Start experience is spotty, weak, and only suggestive of a true "Head Start effect." Academic effects that might be attributable to Head Start are found in one or two specific skill areas in any one region of the country and they are not the same skill areas in each region. Further, there is no consistent relationship between specific skill areas in which the effects are found and the kind of activities which center directors report are emphased in the centers from which the particular children graduated. There are a few instances in which Head Start children appear to have been penalized in their academic performance because of their attendance in Head Start (i.e., there are some negative effects associated with Head Start). These effects, too, are not consistent across regions or activities in the center, and along with the positive findings, are difficult to interpret.

The interpretation we offer here is the simplest rather than the most complex in terms of the causes of these findings, but it is suggestive of a most complex need for further research. This simple explanation is that in some places, Head Start children were instructed rather heavily in the knowledge and skills they would require in public schools and that some of this instruction-based knowledge persisted to the time of testing. This interpretation is based on the fact that the most obvious academic advantages were found in the Black children of the Southeast who were almost all at kindergarten age and probably received a kindergarten curriculum before entering public schools in the first grade. Their center directors reported that they emphasized academic activities, but center directors who also reported the same emphases on their pre-kindergarten children in other regions of the country did not produce children who showed positive academic effects in their first public school testing. It is likely that the content of the "academic activities" emphasized in the Southeast was quite different than the content of the academic activities elsewhere, but there is no evidence on this point.

It is true that children who receive a kindergarten experience do better, at least for the first year, than comparable children who do not receive a kindergarten experience. Where kindergartens do not exist, Head Start may be doing an extremely valuable service. However, the rationale for Head Start lies within its status as a pre-kindergarten, nursery/developmental program. Here, the ready, simple interpretation for the few disparate academic effects is not as available. Just as with the Black children in the Southeast, the pre-kintergarten effects are, in part, associated with conditions in the home which stimulate academic development. In some instances, these home conditions are associated with Head Start, although Head Start does not seem to be strongly influencing home stimulating conditions by way of the parent involvement programs as these programs were measured in the present study. In some cases, Head Start was responsible for the improvement in the homes, and in a subset of these instances, the conditions in the home with respect to academic development contributed to academic performance. The evidence for this sequence of causes is weak, but observable enough to suggest that this sequence can occur. This factor, along with as yet unknown other factors in the Head Start experience, may be the source of scattered effects which can be attributed to Head Start.

If these interpretations are useful, then it is clear that much less is known about the process of successful programing than what is needed to be known in order to improve the situation and realize the potential of Head Start. What is required now is an intensive examination of the range of Head Start experiences and the unique ways by which different children repond to them. It is no longer necessary to struggle to demonstrate that a few academic effects are associated with some children in some places. It is now necessary to find out how different kinds of children and families develop differently under different conditions of preschool experiences. This is the knowledge required to effectively guide public policy in early childhood education. Head Start, as the vehicle for the delivery of a great many critical social and health services to children and families, can also become a vehicle for educational growth when it learns more about how it might do this than it now knows.

The findings with respect to the emotional development of Head Start children are somewhat different than those for academic development, although the need for more understanding of these findings is quite as important. Generally, Head Start children are judged by their public school teachers as more assertive than non-Head Start children. This finding is found broadly across regions, and large enough to be of significant interest to program planners. It is also of interest that this property of Head Start children is considerably higher among those who attended centers described by their directors as emphasizing dramatic/expressive play activities than among children who attended centers that did not emphasize these kinds of activities. This is true in the Southeast where the children are predominantly Black and there are fewer centers with high scores on the expressive/dramatic play scale; in the Northeast where the children are predominantly White and there are many centers with high scores on the expressive/dramatic play scale; and in the West were there were equal numbers of Black and White children and a wide range of scores on the expressive/dramatic scale. The assertiveness scale is therefore related to this curriculum to a considerably greater extent than to any other variable in the present study.

There is at least a psychologic to assertive behavior as the outcome of a curriculum emphasizing expressive/dramatic play. This kind of emphasis is part of the traditional nursery school programming, and a sense of self confidence along with a willingness to express that confidence in self assertive styles has been a goal of the traditional programs. However, if the development of assertive behavior is truely a consequence of particular kinds of Head Start programs, it is not clear why programs with emphases on social development do not show the same effects. It is also not clear why programs emphasizing academic activities in which also provide their children with some opportunities for dramatic/expressive play (thereby combining a sense of academic achievement with a sense of intrapsychic competence) do not show these effects. There is, in other words, a good deal of need to know more about the process by which Head Start children acquire this property of assertiveness which seems to be so clear in the eyes of their public school teachers. If Head Start found that what has been measured in the assertiveness scale is a truely desirable feature in young children, it is not at all clear how teachers might be trained to accomplish such a goal. It is also not clear why there were no observable relationships between parental attitudes or home conditions and the development of assertive behavior. This is not what one would expect so that this issue needs to be explored in some detail as well. Obviously the important next step about this very important finding is to determine how the Head Start experience facilitates the development of assertiveness, and whether parent programs can participate in this developmental process.

B. The Ethnic and Economic Composition of the Head Start Population.

It is clear that the ethnic distribution at Head Start is not equal in the center level. Black children attend centers that are almost entirely Black, and White children attend centers that are almost entirely White. Generally, the distribution of ethnicity among staff follows the distribution of children ethnicity at the center level. Much of this is not suprising since Head Start is organized at the neighborhood level and neighborhoods in the U.S. are not ethnically balanced. In one sense this is desirable since local control of Head Starts is a central thrust of the Head Start mandate. However, such a situation precludes the testing of the notion that mixing children of several ethnic backgrounds is a powerful means of overcoming the psychosocial barriers currently seperating Blacks and Whites. Indeed the notion extends to the expectation that much of the difficulties experienced by Black children in schools, and much of the willingness of White children to accept a lower social status for Black children, stems from just this self perpetuating seperation of the ethnic groups. Head Start presents an opportunity to at least examine the consequences of ethnic mixing and it is unfortunate that the opportunity is not being realized.

There is further reason to suspect that mixing of the groups may have desirable effects. Evidence as presented in Question 7 indicates that children who attend preschools other than Head Start gain some academic advantage over children who do not attend any preschool program before enrolling in public schools. These two groups of children (i.e., those who attend other preschools and those who did not attend any preschools) are generally from higher income families and, in this sample, generally from White families. It is possible that the environment of the preschools to which these children go account for their performance, and the mixing of Black and White children may very well equalize the accessibility to these environments. This is conjecture certainly, but one which might well bear examination. Once again, it seems unfortunate that the opportunity to accomplish this study is not being utilized. It would certainly seem desirable to seek those instances of mixed samples (which did not spontaneously fall into the present sample) in order to carry out such a study.

C. Parent Involvement.

Much has been said about the excitement and enthusiasm generated in and by parents as a result of their involvement in centers. It is expected that this enthusiasm would, in some way, spill over to the children. The sense of pride achieved by parents as a result of various kinds of involvement should produce the kind of sense of self worth that children need in order to deal effectively with the world of the school.

These are most realistic expectations, and there seems to be a good deal of anecdotal evidence that such enthusiasm along with the spillover to children does in fact occur in many places. However, very little of this is discernable in the present data base. It is most likely that the reason for this lay in the manner of selecting a sample for the present study. In effect, a few parents were selected from a large number of centers. If it is assumed that only a few parents in each center take the opportunity to get involved in the manner implied by the description of involvement above, then it is highly likely that a sample will be selected in which very few of the appropriate parents will be included. Obviously, the sampling unit for this kind of problem is the center. It is there where the dynamics which produce involvement exist. It is there that the range of involvement activities can be measured. If an involvement study were to be carried out, centers should be sampled and the goals should be the measurement of the total parent population of each center. Centers should be sampled to maximize the variability of activity and curriculum variables so that the relationship between center policies and the full range of parental behavior vis-a-vis the center could be established. Anything less than such an approach will miss the full reasons for and consequences of parent involvement programs.

Once the center sampling procedure is established in order to describe the total atmosphere of parent participation, then it is also necessary to measure the curriculum as administered to children. This is an observational task and must be accomplished if a causal model involving parent participation, curriculum, and home environment can be tested. If the curriculum of the center is to be considered instructional for the parents as well as the children then intensive analysis of the relationship between center and home must be mounted. The unit of analysis must be considered carefully for each study since it will shift from center to family depending upon the question asked and the treatment considered. This, however, is required if we are to come seriously to grips with the central issues of Head Start.

D. Regional Effects.

There is a good deal of evidence in this data base that gross regional classification carries a large amount of information about the differences in educational and social dynamics surrounding Head Start. Indeed a glance at the city size classification within regions indicates that serious differences at this level also exist. These could not be examined in this study because of the restricted sample size but that a serious problem exists is apparent from the marginals presented. It is appropriate at this time to conclude that this issue should become a central one for future research. Local effects have been the bane of several national studies of school effects, and Head Start should now place the problem in the foreground of research priorities. There are two alternatives for approaching the problem. One is to mount very large studies in which sufficient sample size in each local strata is achieved. This is very expensive and raises issues of aggregation and cross site comparisons. These are extremely difficult matters to deal with and for that reason the second alternative seems more desirable at the moment. This alternative involves a strategy of decentralized research. This means intensive studies in localized areas. In the long run, a series of studies in which the researchers and the data are very close to the subjects, can yield much more understanding of the differences in the processes across sites than a single large study. The accumulation of a large body of coordinated information could yield valid knowledge about many sites, whereas the large national studies produce weak data that cannot be aggregated over many sites at all. The conclusion here is that the strategy for research should shift to the local level with the goal of discerning the social and academic dynamic of the Head Start process.